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9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	TIMAERO IRELAND LIMITED, Plaintiff, v. THE BOEING COMPANY, Defendant.	No. 2:21-00488-RSM THIRD AMENDED COMPLAINT JURY TRIAL DEMANDED					
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LAW OFFICES OF WHITMYER IP GROUP LLC

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LAW OFFICES OF

(203) 703-0800

Plaintiff Timaero Ireland Limited ("Timaero"), by and through its attorneys, Whitmyer IP Group LLC, for its Third Amended Complaint against Defendant The Boeing Company ("Boeing" or "Defendant"), alleges as follows:

I. THE PARTIES

- 1. Plaintiff Timaero is an Irish private company with a principal place of business at 3 Dublin Landings, North Wall Quay, Dublin 1, DUBLIN, Ireland. Timaero is a financial organization in the business of purchasing aircraft and leasing/selling them for profit. Timaero engages in leasing, sub-leasing, sale, and purchase of air transport vehicles.
- 2. Defendant The Boeing Company is a Delaware corporation that has a principal place of business and corporate headquarters located at 100 North Riverside, Chicago, Illinois 60606. Boeing is in the business of, *inter alia*, designing, manufacturing, integrating, assembling, modifying, maintaining, inspecting, testing, servicing, marketing, distributing, and selling aircraft, including the 737 MAX aircraft that is the subject of this lawsuit. The Boeing Company employs over 50,000 people in the state of Washington.
- 3. Defendant The Boeing Company owns and controls the unincorporated division, Boeing Commercial Airplanes ("BCA") which maintains a corporate headquarters in Renton, Washington. BCA, on behalf of The Boeing Company, is responsible for *inter alia*, designing, manufacturing, integrating, assembling, modifying, maintaining, inspecting, testing, servicing, marketing, distributing, and selling aircraft, including the 737 MAX aircraft that is the subject of this lawsuit.

¹ Timaero's address is current as of the filing date.

II. JURISDICTION AND VENUE

- 4. Subject matter jurisdiction exists by virtue of 28 U.S.C. § 1332, diversity jurisdiction, in that this is an action between a citizen of a state and a citizen of a foreign state, and the amount in controversy exceeds the sum or value of \$75,000, exclusive of interest and costs.
- 5. This Court has personal jurisdiction over Boeing. Boeing transacts business and manufactures the 737 MAX aircraft in King County, Washington, including in Renton, Washington. At all relevant times, Boeing has been authorized to do business, and has been transacting or conducting business, in the State of Washington. Boeing designed, engineered, sought regulatory certification, marketed, sold, assembled, and delivered the 737 MAX aircraft at issue in this case in the State of Washington, particularly in Renton, Washington and the Western District of Washington.
- 6. Venue is proper in this Court pursuant to 28 U.S.C. § 1391 because Boeing resides in the Western District of Washington and a substantial part of the events or omissions giving rise to the claim occurred, or a substantial part of property that is the subject of the action is situated in, the Western District of Washington. Boring transacts business in and the 737 MAX is designed, assembled, and sold in King County, including in Renton, Washington. The 737 MAX program, encompassing approximately 10,000 employees, has at all times been located in Renton, Washington. Timaero took delivery of its 737 MAX aircraft at Boeing's delivery center in Seattle, Washington.
- 7. The Purchase Agreement is an adhesion contract drafted by Boeing, and Timaero was never provided a meaningful opportunity to negotiate better contractual

protections against Boeing's fault or negligence. The Purchase Agreement provides that it is to be interpreted and governed under the laws of the State of Washington.

III. SUMMARY

- 8. This is a complaint under Washington law for fraud, material misrepresentation of fact, violation of the Washington Product Liability Act, RCW 7.72.010 et seq., and breach of contract.²
- 9. Timaero contracted with Boeing to purchase twenty-two (22) Boeing Model 737 MAX aircraft. Boeing represented to Timaero in multiple meetings, marketing materials, business proposals, press releases, and publicly that the 737 MAX would not require additional simulator training for pilots already certified to fly its predecessor 737 NG (i.e., will meet Level B non-simulator pilot training requirements), and would be airworthy, safe, free from design defects, and in compliance with appropriate aviation regulations. Boeing and Timaero expressly contracted in a Purchase Agreement, and through seven (7) supplemental agreements thereafter ("the Supplemental Agreements"), that no additional simulator training would be required for 737 NG pilots.
- 10. The 737 MAX Boeing designed and manufactured was not safe for flight. Lion Air Flight 610 and Ethiopian Airlines Flight 302 crashed, killing all 346 people onboard. These deaths are a result of Boeing's illegal actions, willful decisions in designing a defective aircraft that fails to meet aviation regulations, and purposeful concealment of

² Timaero's fraud claim in its First Amended Complaint was construed under Illinois law. In this Third Amended Complaint, Timaero's claims of fraud and material misrepresentation of fact are brought under and pursuant to Washington law, but nevertheless satisfy Illinois law as well.

critical information from and/or deceit of the United States Federal Aviation Administration ("FAA"), foreign regulators, and Boeing's customers, including Timaero.

- 11. Boeing has admitted that its illegal actions amount to criminal fraud. On January 7, 2021, Boeing entered into a deferred prosecution agreement ("DPA") in the United States District Court for the Northern District of Texas. The DPA is attached hereto as Exhibit 1 and includes a series of admissions in a Statement of Facts included as Appendix A to the DPA ("DPA-A").³
- 12. The criminal information (attached as Exhibit 2) charges Boeing with one count of conspiracy to defraud the FAA in connection with its evaluation of Boeing's 737 MAX aircraft.⁴
- 13. The DPA provides that Boeing "fraudulently obtained" a determination from the FAA that the 737 MAX did not require simulator training through a conspiracy spanning at least November 2016 through December 2018. DPA ¶ 4(a).
- 14. In the DPA, Boeing "admits, accepts, and acknowledges that it is responsible under United States law for the acts of its officers, directors, employees, and agents as charged in the Information, and as set forth in the Statement of Facts, and that the allegations described in the Information and the facts described in the Statement of Facts are true and accurate." DPA ¶ 2. Boeing also agreed that "it will not dispute the Statement of Facts" and "shall not . . . make any public statement, in litigation or otherwise, contradicting the acceptance of responsibility by [Boeing]" for its fraud. *Id.* ¶¶ 2, 32.

³ Available at https://www.justice.gov/opa/press-release/file/1351336/download.

⁴ Available at https://www.justice.gov/opa/press-release/file/1351331/download.

- 15. Among other things, Boeing also admits in the DPA that "[t]he purpose of the conspiracy was to defraud the FAA [Aircraft Evaluation Group ("AEG")] by impairing, obstructing, defeating, and interfering with the lawful function of the FAA AEG by dishonest means in connection with its publication of the 737 MAX [Flight Standardization Board] Report and its differences-training determination for the Boeing 737 MAX, in order to bring about a financial gain to Boeing and to benefit Boeing Employee-1 [(Mr. Mark Forkner)] and Boeing Employee-2 [(Mr. Patrick Gustavsson)] in connection with the Boeing 737 MAX." DPA-A ¶ 17.
- 16. Pursuant to the DPA, Boeing agreed to pay a total criminal monetary amount of over \$2.5 billion. *Id.* ¶ 7. A portion of this criminal penalty, specifically \$243,600,000 "represent[s] Boeing's cost-savings, based on Boeing's assessment of the cost associated with the implementation of full-flight simulator [non-Level B] training for the 737 MAX." DPA ¶ 9(b).
- 17. One of the "remedial measures" Boeing engaged in following the offense described in the DPA included "reorganizing the Company's engineering function to have all Boeing engineers, as well as the Company's Flight Technical Team, report through the Company's chief engineer rather than to the business units." DPA ¶ 4(d). Thus, Boeing's "business units," including the sales team, were directly involved in the fraud admitted to by Boeing in the DPA and that which is disclosed herein.
- 18. Boeing has admitted that its fraudulent misrepresentations and omissions to the FAA set out in the DPA amount to criminal fraud. Boeing made the same fraudulent misrepresentations and omissions to Timaero through Boeing and Timaero's Purchase Agreement and subsequent Supplemental Agreements and representations at and through

delivery of two 737 aircraft, each of which agreement and act incorporates Boeing's fraudulent misrepresentations and omissions to the FAA. Boeing's fraudulent misrepresentations and omissions set forth in the DPA amount to civil fraud upon Timaero.

19. Timaero is and continues to be damaged by Boeing's actions, including loss of business, interest accrued on Timaero's loan to purchase the aircraft, Boeing's refusal to return Timaero's deposit of \$189,224,800, and being in a contract for aircraft that are now either worthless, commercially damaged beyond repair according to the terms of the Purchase Agreement, or seriously diminished in value.

IV. FACTS

20. At all times mentioned herein, Boeing, and each of its officers, employees, agents, and servants named herein were operating and acting within the scope of their employment, agency and service, and Boeing was aware of, and ratified and approved the acts of and misrepresentations and omissions made by each named officer, employee, agent or servant. Each act, misrepresentation and omission made by each named officer, employee, agent or servant of Boeing was done in furtherance of Boeing's interest and substantially assisted Boeing's commission and omission of the wrongful acts alleged herein.

A. The Origins of the 737 MAX Aircraft

21. Boeing designed its first 737 aircraft in the 1960s. The 737 aircraft has been updated since then in various series, such as "Original," "Classic," and "Next Generation" ("NG"). Boeing's 737 MAX is the latest 737 aircraft series.

- 22. The 737 MAX was designed by Boeing as a competitive answer to a new version of an airplane developed by one of Boeing's top rivals in commercial airplanes, Airbus. DPA-A ¶ 5.
- On December 1, 2010, Airbus announced plans for its A320neo, which would be a revamped A320 aircraft that would be 15%-20% more fuel efficient by placing new, larger engines on the existing A320 platform. Boeing's initial response to Airbus' announcement was that Airbus' decision to revamp an existing aircraft, rather than design a new one, was a poor business and engineering decision. The acting Chief Executive of Boeing Commercial Airplanes, James Albaugh, stated, "It's going to be a design change that will ripple through the airplane" and "I think they will find it more challenging than they think it will be." 5
- 24. In 2011, Boeing considered designing an entirely new model of aircraft to replace the 737, but pressure was mounting from customers who were considering purchasing the rival Airbus A320neo. Full-scale design and production of a new aircraft would require nearly a decade of development, new FAA certification, and additional training for airline crews. Boeing did not have such time and could not inflict such costs on its customers.
- 25. Desperate to retain its market share against Airbus, Boeing instead chose to redesign the 737. In August 2011, Boeing's Board of Directors, including James McNerney, David L. Calhoun, Arthur D. Collins, Jr., Linda Z. Cook, Kenneth M. Duberstein, Admiral

⁵ David Gelles, Natalie Kitroeff, Jack Nicas and Rebecca R. Ruiz, Boeing Was 'Go, Go, Go' to Beat Airbus With the 737 Max, NEW YORK TIMES (March 23, 2019), https://www.nytimes.com/2019/03/23/business/boeing-737-max-crash.html.

Edmund P. Giambastiani, Jr., Edward M. Liddy, John F. McDonnell, Susan C. Schwab, Ronald A. Williams, and Mike S. Zafirovski, authorized the new 737 MAX, which would be an update to the previous 737 NG model.⁶ However, according to three people present for the meeting, before approving plans for a new jetliner called the 737 Max, Boeing's Board of Directors discussed how quickly and cheaply it could be built to compete with against Airbus, and did not ask detailed questions about the airplane's safety.⁷

- 26. Boeing purposely chose to redesign the old 737 NG rather than build an entirely new aircraft to expedite the regulatory approval process by using an "amended type certificate." The FAA grants amended type certificates to modifications of previously approved aircraft. Boeing knew that if the 737 MAX was certified through an amendment of the 737's 55-year-old type certificate, then Boeing could get approval in six years, instead of the ten required for a new design, and it would be far cheaper than designing a whole new plane.
- 27. Boeing also knew that its own employees could approve most of the aircraft on behalf of the FAA as it had effective control of the FAA's certification process. Boeing lobbied to expand the FAA's "Organization Designation Authorization" ("ODA"), a program that permits the FAA to delegate certifying compliance to aircraft manufacturers. Boeing's ODA permitted it to manage and make findings related to type certification

⁶ John H. Biggs (resigned May 2011), John E. Bryson (resigned on or about May 2011), and William M. Daley (resigned Jan 10, 2011) were previously on the Board during the relevant time, but resigned prior to August 2011.

⁷ Douglas MacMillan, 'Safety was just a given': Inside Boeing's boardroom amid the 737 Max crisis, The Washington Post (May 5, 2019), https://www.washingtonpost.com/business/2019/05/06/safety-was-just-given-inside-boeings-boardroom-amid-max-crisis/.

programs, issue airworthiness certificates and approvals, determine conformity, approve data for major repairs, and approve design changes to products.

- 28. At the time the 737 MAX was certified, Boeing had 1,500 employees in its ODA program, while the FAA had fewer than 45 employees working on the 737 MAX's certification. Initially, the FAA delegated 40% of the certification projects to Boeing, but Boeing pressured the FAA to delegate more control to speed-up the process. Unknown to Boeing customers, including Timaero, Boeing ultimately controlled and was permitted to self-certify 96% of its own work on the 737 MAX, including on critical safety issues.
- 29. Boeing's executive leadership and Board of Directors were responsible for overseeing the 737 MAX's development and the safety of Boeing's aircraft design and manufacturing processes. Boeing's Board monitored the progress of 737 MAX through briefings at its regular meetings as well as other communications. Boeing's executive leadership and Board knew of the problems with MCAS and either willfully concealed those facts from customers, regulators, and the flying public to boost the company's profits or were negligent in their oversight of Boeing's operations.
- 30. Boeing's most senior executives were required by law to be directly involved in submissions to the FAA for the certification of the 737 MAX. Boeing entered into a settlement agreement with the FAA on December 18, 2015 to resolve thirteen pending FAA investigations. In addition to Boeing paying millions of dollars in fines, Boeing was required to have direct involvement of Boeing "executive-level" management in regulatory compliance, including safety management and completeness of submissions to the FAA.
 - B. Certification for the 737 MAX Aircraft and Relevant Personnel

- 31. U.S. regulations require the FAA, an organization within the United States Department of Transportation, to evaluate and approve airplanes for commercial use. DPA-A \P 6.
- 32. This approval is required prior to Boeing's sale of aircraft in the United States.
- 33. Such evaluation and approval are also required by the Purchase Agreement between Boeing and Timaero described herein.
- 34. As part of the evaluation and approval process, the FAA had to make two distinct determinations: (i) whether the aircraft met U.S. federal airworthiness standards; and (ii) what minimum level of pilot training would be required for a pilot to fly the aircraft for a U.S.-based airline. DPA-A ¶ 7.
- 35. The FAA AEG was principally responsible for determining the minimum level of pilot training required for a pilot to fly the aircraft. DPA-A ¶ 8.
- 36. To make that determination, the FAA AEG compared the new version of the aircraft (such as the 737 MAX) to a similar, prior version of the aircraft (such as the 737 NG). *Id*.
- 37. After evaluating the differences between the new and prior versions of the airplane, the FAA AEG mandated the minimum level of pilot training, known as "differences training," for the new version. *Id*.
- 38. Based on the nature and extent of the differences between the new and prior version of the airplane, the FAA AEG assigned a level of differences training ranging from "Level A" through "Level E." These levels of differences training ranged in rigor, with "Level A" being the least intensive and "Level E" the most intensive. As relevant here,

"Level B" differences training generally included computer-based training ("CBT") training, and "Level D" differences training generally included full-flight simulator training. DPA-A ¶ 9.

- 39. Level B differences training does not require simulator training (i.e., is "non-simulator training").
- 40. At the conclusion of the FAA's evaluation of a new version of an aircraft, the FAA AEG publishes a Flight Standardization Board Report ("FSB Report"). Among other things, the FSB Report contains relevant information about certain airplane systems and parts that the airplane manufacturer was required to incorporate into airplane manuals and pilot-training materials for all U.S.-based airlines that would fly the airplane. The FSB Report also contains the FAA AEG's differences-training determination. DPA-A ¶ 10.
- 41. Boeing's 737 MAX Flight Technical Team was principally responsible for providing to the FAA AEG all information that was relevant to the FAA AEG in connection with the FAA AEG's publication of the 737 MAX FSB Report. DPA-A¶11.
- 42. The 737 MAX Flight Technical Team was separate and distinct from another group within Boeing that was responsible for providing information to the FAA for certification of whether the airplane met U.S. federal airworthiness standards. *Id*.
- 43. From in or around early 2012 until in or around early 2014, Mark Forkner was a Technical Pilot for Boeing's 737 MAX Flight Technical Team. DPA-A ¶ 12.
- 44. In or around early 2014, Mr. Forkner became Boeing's 737 MAX Chief Technical Pilot. In that role, Mr. Forkner led the 737 MAX Flight Technical Team. *Id.*
- 45. In or around July 2018, Mr. Forkner left Boeing to work for a major U.S.-based airline. *Id*.

- 46. From in or around mid-2014 until in or around July 2018, Mr. Gustavsson was a Technical Pilot for Boeing's 737 MAX Flight Technical Team. DPA-A ¶ 13.
- 47. In or around July 2018, after Mr. Forkner left Boeing, Mr. Gustavsson became Boeing's 737 MAX Chief Technical Pilot. In that role, Mr. Gustavsson led the 737 MAX Flight Technical Team. *Id*.
- 48. Boeing, including its engineering department, understood that the FAA AEG relied on Mr. Forkner and Mr. Gustavsson, as members of Boeing's 737 MAX Flight Technical Team, to provide to the FAA AEG all information that was relevant to the FAA AEG in connection with the FAA AEG's publication of the 737 MAX FSB Report, including information that could impact the FAA AEG's differences-training determination. DPA-A ¶ 14.
- 49. Boeing, including its engineering department, also understood that, because flight controls were vital to flying modern commercial airplanes, differences between the flight controls of the 737 NG and the 737 MAX were especially important to the FAA AEG for purposes of its publication of the 737 MAX FSB Report and the FAA AEG's differences-training determination. DPA-A ¶ 15.
- 50. Upon information and belief, Boeing's operations, including engineering, testing, FAA compliance, and sales, knew of the issues and defects identified herein. For example, Mr. Forkner and Mr. Gustavsson reported through Boeing's business units while carrying out the acts described herein. DPA ¶ 4(d); DPA-A ¶ 11. Thus, Boeing's business and sales departments knew of the material defects in the 737 MAX described herein.
 - C. Boeing Seeks an Amended Type Certification for the 737 MAX Aircraft

- 51. The development of the 737 MAX aircraft, twenty-two of which Timaero would eventually pay deposits to purchase, began at least as early as January 2012 when Boeing filed an Amended Type Certification application for the aircraft with the FAA. Exhibit 3, "OIG Report," at 12.8
- 52. Production of the 737 MAX involves manufacture of aircraft that are certified, and then manufacture of additional aircraft for customers that meet those precise certifications. Thus, manufacture of Timaero's aircraft began in conjunction with Boeing's Amended Type Certification application filed in January 2012.
- 53. From the very beginning of the 737 MAX program, Boeing pressured employees to minimize development time and do whatever was necessary to keep the redesign within the amended type certificate. Engineers were pushed to submit technical drawings and designs at roughly double the normal pace. "The timeline was extremely compressed," an engineer said, "[i]t was go, go, go." One former designer on the team working on flight controls for the 737 MAX said the group had at times produced sixteen technical drawings a week, double the normal rate. "They basically said, 'We need something now,'" the designer said. ¹⁰

⁸ U.S. Dept. of Transportation, Office of Inspector General, Timeline of Activities Leading to the Certification of the Boeing 737 MAX 8 Aircraft and Actions Taken After the October 2018 Lion Air Accident, pg. 8 dated June 29, 2020, https://www.oig.dot.gov/sites/default/files/FAA%20Oversight%20of%20Boeing%20737%20MAX%20Certification%20Timeline%20Final%20Report.pdf.

⁹ David Gelles, Natalie Kitroeff, Jack Nicas and Rebecca R. Ruiz, Boeing Was 'Go, Go, Go' to Beat Airbus With the 737 Max, NEW YORK TIMES (March 23, 2019), https://www.nytimes.com/2019/03/23/business/boeing-737-max-crash.html.

¹⁰ *Id*.

- 54. Another former engineer who performed flight-testing work said, "there was always talk about how delays of even one day can cost substantial amounts," and staff were expected to keep their heads down and not speak-up against anything that would delay the project. One manager told an engineer, "Don't rock the boat. You don't want to be upsetting executives." These pressures continued throughout the 737 MAX's development, "as everyone has it in their head that meeting schedule is most important because that's what Leadership pressures and messages. All the messages are about meeting schedule, not delivering quality [or safety]." 13
- 55. One of the highest pressures from top Boeing management was that under no circumstances should the 737 MAX require any new simulator training for 737 NG trained pilots. Numerous former Boeing employees have reported that senior management, including Keith Leverkuhn (Vice President and General Manager of the 737 MAX Program) and Michael Teal (737 MAX Program Manager) pressured the 737 MAX team to ensure that no new simulator training for 737 NG pilots was required. Rick Ludtke, an engineer who spent 19 years at Boeing stated, "[a]ny designs we created could not drive any new training that required a simulator. That was a first."¹⁴

¹¹ Dominic Gates and Mike Baker, The inside story of MCAS: How Boeing's 737 MAX system gained power and lost safeguards, SEATTLE TIMES (June 24, 2019), https://www.seattletimes.com/seattle-news/times-watchdog/the-inside-story-of-mcas-how-boeings-737-max-system-gained-power-and-lost-safeguards/.

 $^{^{12}}$ Id

¹³ Joe Nocera, News Analysis: Boeing sacrificed quality on the altar of shareholder value, Los Angeles Times, (January 17, 2020), https://www.latimes.com/business/story/2020-01-17/nocera-boeing.

¹⁴ David Gelles et al. Boeing Was 'Go, Go, Go' to Beat Airbus With the 737 Max, NEW YORK TIMES, (March 23, 2019), https://www.nytimes.com/2019/03/23/business/boeing-737-max-crash.html.

D. Boeing Includes a New and Novel Software in the 737 MAX Aircraft, MCAS, During Initial Development

- 56. Like the new version of Airbus's airplane, the 737 MAX promised increased fuel efficiency over its prior version, the 737 NG. DPA-A ¶ 5.
- 57. With this increased efficiency, the 737 MAX offered fuel-cost savings for airlines. *Id*.
- 58. To achieve its promised fuel efficiency, the 737 MAX used larger engines than the 737 NG. DPA-A \P 20.
- 59. The new generation high efficiency engines (known as CFM LEAP-1B engines) were one of the most significant design changes incorporated into the 737 MAX aircraft. ¹⁵ This change was difficult to implement because the LEAP-1B engines were larger and could not easily fit under the 737's relatively low wings. To obtain adequate ground clearance without making more significant and more expensive design changes, Boeing left the wing and fuselage heights nearly unchanged, but moved the engines up and forward in order to maintain the mandatory minimum 17-inch ground clearance from the bottom of the new and larger engines. ¹⁶ Boeing was required to keep the previous 737s low wing profile to stay within the old 737-type certificate.

¹⁵ Boeing Press Release, Aug. 30, 2011 "Boeing Launches 737 New Engine Family with Commitments for 496 Airplanes from Five Airlines," https://boeing.mediaroom.com/2011-08-30-Boeing-Launches-737-New-Engine-Family-with-Commitments-for-496-Airplanes-from-Five-Airlines.

¹⁶ See Anurag Kotoky and Kyunghee Park, "Boeing's Grounded 737 Max — The Story So Far", Washington Post, July 9, 2019, https://www.washingtonpost.com/business/boeings-grounded-737-max-the-story-so-far/2019/07/08/5eb2e4be-a1e6-11e9-a767-d7ab84aef3e9_story.html; https://www.latimes.com/local/california/la-fi-boeing-max-design-20190315-story.html.

- 60. The larger engines, and their placement under the airplane's wings, meant that the aerodynamics of the 737 MAX differed from those of the 737 NG. DPA-A ¶ 20.
- 61. These different aerodynamics created a new handling characteristic for the 737 MAX that caused the 737 MAX's nose to pitch up during a certain flight maneuver called a high-speed, wind-up turn. A high-speed, wind-up turn generally involved sharply turning the airplane at high speed (approximately Mach 0.6-0.8) in a corkscrew-like pattern. DPA-A ¶ 21.
- 62. The tendency of the 737 MAX to pitch up during certain flight conditions, which could impact the pilot's control of the aircraft, and created a risk that the aircraft would stall (lose power) and crash, were exposed through wind tunnel tests conducted very early during development of the 737 MAX. Thus, Boeing engineers predicted this tendency early in the design process but monetary pressures, differences training considerations, and certification expediency were prioritized over safety, engineering, and design.¹⁷
- 63. Thus, the new mount location of these engines gave the 737 MAX a new and unacceptable handling characteristic a propensity for the aircraft's nose to abnormally pitch up (i.e., the nose would move up and cause the aircraft to climb and/or slow down) under certain flight conditions.¹⁸

¹⁷ Dominic Gates and Mike Baker, "The inside story of MCAS: How Boeing's 737 MAX system gained power and lost safeguards," Seattle Times, June 22, 2019, https://www.seattletimes.com/seattle-news/times-watchdog/the-inside-story-of-mcas-how-boeings-737-max- system-gained-power-and-lost-safeguards/.

¹⁸ *Id*.

- 64. A pitch-up tendency at low speed could cause a dangerous aerodynamic stall¹⁹ and is not allowed by FAA regulations. An FAA regulation requires that "[n]o abnormal nose-up pitching may occur.... In addition, it must be possible to promptly prevent stalling and to recover from a stall by normal use of the controls."²⁰ Such undesirable handling characteristics are not unheard of when an aircraft's configuration is changed. They can usually be fixed with various well-understood aerodynamic changes, but making such changes is expensive and can delay an aircraft's certification, and may impact a differences training determination.
- 65. Notably, a high-speed, wind-up turn was a "certification" maneuver, that is, a maneuver outside the limits of what the 737 MAX would be expected to encounter during a normal commercial passenger flight. Nevertheless, if Boeing did not fix the 737 MAX's pitch-up characteristic in high-speed, wind-up turns, the FAA could determine that the 737 MAX did not meet U.S. federal airworthiness standards. DPA-A ¶ 22.
- 66. Another problem that came to light during Boeing's early testing was that pilots would not feel a smooth and continuous increase in resistance on the control column during certain high-speed maneuvers. Rather, pilots felt a slackening of resistance. This condition violated FAA airworthiness regulations, which require planes to handle with smoothly changing control column forces.

¹⁹ A "stall" is a dangerous condition for aircraft and occurs when there is insufficient air moving across the aircraft's wings to keep the aircraft flying. This usually – but not always – happens when the aircraft is moving too slowly through the air. A stall causes the aircraft to suddenly drop and can cause an even more dangerous spin. Stopping the stall requires the pilot to take quick and decisive action to return the aircraft to safe flight.

²⁰ 14 C.F.R. Sec. 25.203(a) – Stall Characteristics.

- 67. The most reliable way to restore the aircraft's stability would have been to make structural changes to the frame. However, Boeing chose not to make such changes because then the 737 MAX could no longer be certified under the old 737-type certificate. Boeing could not accept such delays and increased costs and opted to prioritize money and certification considerations over engineering and safety. As shown herein, Boeing's actions in developing and altering MCAS did not adequately remedy the identified defects above and did not provide for the safe operation of the 737 MAX.
- 68. Rather than making expensive aerodynamic changes, Boeing decided to attempt to fix the 737 MAX's pitch-up problem with software, but they failed to properly disclose this design decision to the FAA or customers, including Timaero.
- 69. In doing so, Boeing ignored the fact that the 737 MAX did not have the added redundancies that a fly-by-wire aircraft has. The software that Boeing designed would automatically activate a system that applied downward stabilizer trim in order to reduce the force the pilots needed to use on the control wheel to push the nose down. This software—called MCAS—was designed into the 737 MAX to deal with the pitch-up tendency during wind-up turns, so it activated when it sensed the aircraft was near a stall and was experiencing high G-forces.²¹

²¹ Dominic Gates and Mike Baker, "The inside story of MCAS: How Boeing's 737 MAX system gained power and lost safeguards," Seattle Times, June 22, 2019, https://www.seattletimes.com/seattle-news/times-watchdog/the-inside-story-of-mcas-how-boeings-737-max-system-gained-power-and-lost-safeguards/.

- 70. MCAS works by receiving data from an angle-of-attack sensor on the plane's nose. If the data shows that the plane is pitching too high, the MCAS directly engages the tail's horizontal stabilizer to level the plane. No pilot input is necessary.²²
- 71. MCAS also makes the 737 MAX appear to pilots as handling like older 737s. Boeing took a position that pilots did not need to know about the MCAS or be trained to use the new system to allow the 737 MAX to earn a common "type rating" with existing 737 models. This allowed airlines to minimize training of pilots moving from the 737 NG to the 737 MAX.
- 72. Thus, to fix the pitch-up characteristic, Boeing created MCAS and incorporated it as a part of the 737 MAX's flight controls. MCAS was an aircraft "part" within the meaning of Title 18, United States Code, Sections 31(a)(7) and 38. In operation, MCAS would automatically cause the airplane's nose to pitch down by adjusting the 737 MAX's horizontal stabilizer (a horizontal tail located near the rear of the airplane). As originally designed, MCAS could only activate during a high-speed, wind-up turn. DPA-A ¶ 23.
- 73. For the 737 MAX, MCAS as originally designed could only affect the tail's horizonal stabilizer a maximum of about 0.6-degrees during a period of about 10 seconds. MCAS also originally had multiple angle-of-attack sensors to provide data to MCAS. Finally, Boeing's original design included an indicator light that would appear on the flight control panel if there was a failure of the MCAS flight control system.

²² See, Dominic Gates and Mike Baker, The inside story of MCAS: How Boeing's 737 MAX system gained power and lost safeguards, SEATTLE TIMES (June 24, 2019), https://www.seattletimes.com/seattle-news/times-watchdog/the-inside-story-of-mcas-how-boeings-737-max-system-gained-power-and-lost-safeguards/.

74. MCAS had never been used on a commercial aircraft and never should have been used on a passenger aircraft without full disclosure to the FAA, which Boeing intentionally did not do. MCAS was originally developed for the KC-46A Pegasus Air Force Tanker around the early 2000s.²³ The KC-46A's MCAS was designed by Boeing to rely on inputs from two angle of attack ("AOA") sensors and with limited power to move the tanker's nose—deliberate checks against the system acting erroneously or causing a pilot to lose control.²⁴

E. Boeing Conceals MCAS's Significance from, and Misrepresents its Significance to, Regulators

- 75. MCAS was briefly presented to the FAA in a March 21, 2012 General Familiarization Meeting, but was not an area of emphasis. Exhibit 3 at 13.
- 76. The FAA allowed Boeing to proceed with its proposal for the 737 MAX aircraft on March 22, 2012 one day after the General Familiarization Meeting. MCAS was included in the accepted Amended Type Certificate application as a modification to the previous aircraft model's flight control system software. Exhibit 3 at 14.
- 77. On May 1-2, 2012, the FAA and Boeing held a Technical Familiarization Meeting. In Boeing's presentations at this meeting, MCAS was included as a provisional modification to address the plane's tendency to pitch upwards at high speeds. However, MCAS was still not an area of emphasis; only 23 of 482 slides covered primary aircraft

²³ Alison Sider and Andrew Tangel, Before 737 MAX, Boeing's Flight-Control System Included Key Safeguards, THE WALL STREET JOURNAL (Sept. 29, 2019), https://www.wsj.com/articles/before-737-max-boeings-flight-control-system-included-key-safeguards-11569754800.

²⁴ *Id*.

flight controls, and only 2 lines of text within those almost 500 slides—covered over a 2-day period—referenced MCAS.

- 78. In a November 27, 2012 email that Boeing produced to the House T&I Committee, a Boeing employee noted that an MCAS light indication on the flight control panel had been removed enabling Boeing to hide MCAS's existence.
- 79. From February 15 November 14, 2013, the FAA reviewed and accepted Boeing's Master Certification Plan, which is a key document in the certification process that describes how the FAA and Boeing planned to certify the 737 MAX aircraft, including the method for testing key items.
- 80. During this same time period, between 2012 and 2014, Boeing and FAA collaborated to establish the initial certification basis for the 737 MAX, which was accepted on February 6, 2014.
- 81. Prior to and during the General Familiarization Meeting, the Technical Familiarization Meeting, the Master Certification Plan process, and the initial certification basis process, Boeing knew that MCAS's use on the 737 MAX was new and novel. Boeing knew that disclosing MCAS's novelty to customers and regulators would jeopardize a Level B differences training determination by the FAA. But instead of disclosing this fact and accepting the resulting cost and delay in favor of safety, Boeing opted for money and certification expediency and hid these design deficiencies from the FAA and Timaero despite having a duty to speak.
- 82. Prior to and during the General Familiarization Meeting, the Technical Familiarization Meeting, the Master Certification Plan process, and the initial certification basis process, Boeing knew that the version of MCAS installed on KC-46A materially

a median input from AOA sensors on both sides of the aircraft, while the 737 MAX used only AOA sensor data from one sensor. The KC-46A MCAS did not activate repeatedly, like the 737 MAX MCAS. Further, the KC-46A MCAS included an automated pilot control column cutout, which will electronically disable the airplane's trim system if the pilot's control column is pulled back beyond a specified point. The 737 MAX MCAS did not.

- 83. Prior to and during the General Familiarization Meeting, the Technical Familiarization Meeting, the Master Certification Plan process, and the initial certification basis process, Boeing knew that MCAS on the 737 MAX controlled the aircraft's movement in a new way. Boeing knew also that since MCAS on the 737 MAX controlled the aircraft's movement in a new way, Boeing would not be able to secure Level-B differences training determination for the 737 MAX.
- 84. Accordingly, at least as early as March 2012, Boeing knew that MCAS posed a severe threat to obtaining Level B non-simulator differences training for the 737 MAX aircraft. Boeing knew as early as 2012 that a truthful and candid disclosure of MCAS's use and intended use on the 737 MAX would result in additional simulator training, or would severely jeopardize Level B non-simulator differences training.
- 85. For example, in 2012, it took a Boeing test pilot more than 10 seconds to respond to uncommanded MCAS activation in a flight simulator, which the pilot found to be "catastrophic."²⁵

²⁵ Transportation Committee Final Report, supra note 14, at 87.

- 86. Upon information and belief, also between 2012 and early 2014, Boeing was performing testing and analyses related to the use of MCAS on the 737 MAX and possessed information about the necessity of expanding MCAS's use beyond its initial representations to the FAA, as further explained herein. Upon information and belief, Boeing's testing and analysis related to the use of MCAS on the 737 MAX between 2012 and early 2014 was used in modifying and updating MCAS during 2015. Such modifications and updates ultimately expanded MCAS's use at least as early as March 2016, as further explained herein.
- 87. Boeing knew between at least 2012 and early 2014 that adding MCAS to the 737 MAX made false its promise of no simulator training for pilots already certified to fly its predecessor 737 NG (Level B non-simulator pilot training requirements) so, instead of disclosing MCAS, Boeing concealed it to prioritize money and certification expediency over safety.
- 88. As a result, Boeing knowingly made material misrepresentations that it knew were false and/or were made with reckless disregard for the truth, and material omissions, to the FAA to approve MCAS and to certify the 737 MAX without any additional pilot simulator training. Boeing made the same misrepresentations and omissions to Timaero.
- 89. Indeed, as of July 7, 2024 Boeing intends to plead Guilty²⁶ to a criminal information that alleges Boeing "knowingly and willfully, and with the intent to defraud, conspired and agreed together with others to defraud the United States by impairing, obstructing, defeating, and interfering with, by dishones means, the lawful function of a

²⁶United States v. The Boeing Company (4:21-cr-00005) (N.D. Tex.) ECF #204.

United States government agency, to wit, the Federal Aviation Administration Aircraft Evaluation Group ("FAA AEG") within the United States Department of Transportation, in connection with the FAA AEG's evaluation of the Boeing 737 MAX airplane's Maneuvering Characteristics Augmentation System ("MCAS"), including for purposes of the 737 MAX Flight Standardization Board Report ("FSB Report") and the 737 MAX differences-training determination."

- 90. Boeing made each of false statements above to the FAA with the intention that Timaero would make its purchasing decisions based on those particular statements
- 91. As Boeing knew, "Level B" differences training was significantly less expensive for airlines to complete than "Level D." For example, a pilot could complete "Level B" differences training from anywhere in the world in a matter of hours using a computer or tablet. In contrast, a pilot could complete "Level D" differences training only by appearing in person wherever the pilot's airline operated a full-flight simulator. Apart from the cost of acquiring one or more multimillion-dollar simulators and other related expenses, airlines that were required by the FAA AEG to train pilots on a full-flight simulator could also lose revenue that the pilot might otherwise have generated from flying airline passengers during that time. Accordingly, if the FAA AEG required a less rigorous level—such as "Level B"—of differences training for the 737 MAX in the 737 MAX FSB Report, the 737 MAX would be a more attractive option for Boeing's airline customers already flying the 737 NG than switching to an entirely new airplane, such as the new

²⁷United States v. The Boeing Company (4:21-cr-00005) (N.D. Tex.) ECF #1.

version of Airbus' airplane, as such customers would save significant money in pilot-training costs by transitioning to the 737 MAX. DPA-A ¶ 18.

- 92. Principally for this reason, Boeing's stated objectives in designing the 737 MAX included securing the FAA AEG's determination to require no greater than "Level B" differences training in the 737 MAX FSB Report. Mr. Forkner and Mr. Gustavsson understood as much. For example, in or around November 2014, Mr. Gustavsson wrote in an internal Boeing electronic chat communication to Mr. Forkner that "nothing can jepordize [sic] level b[.]" In or around December 2014, Mr. Forkner wrote in an email to another Boeing employee that "if we lose Level B [it] will be thrown squarely on my shoulders. It was [Mr. Forkner], yes [Mr. Forkner]! Who cost Boeing tens of millions of dollars!" DPA-A ¶ 19.
- 93. Boeing was motivated to do all that was necessary to not have any simulator training because it promised to pay certain customers \$1 million per plane if simulation training was found necessary by the FAA. Exhibit 4, "House Report," at 24, 138, and 148.²⁸

F. Boeing Conceals MCAS's Significance from, and Misrepresents its Significance to, Customers, Including Timaero

94. As described herein, Boeing's "ground rule" for engineers during the development of the 737 MAX was to avoid any features that would require pilot training in

port%20for%20Public%20Release.pdf.

²⁸ The House Committee on Transportation & Infrastructure, Final Committee Report, The Design, Development & Certification of the Boeing 737 MAX, dated Sept. 2020,

https://transportation.house.gov/imo/media/doc/2020.09.15%20FINAL%20737%20MAX%20Re

a flight simulator.²⁹ Certification expediency should never drive the design process of a passenger jet when it diminishes passenger safety, but it did at Boeing with the 737 MAX. A Boeing engineer who worked on the cockpit design of the 737 MAX said "the company was trying to avoid costs and trying to contain the level of change. They wanted the minimum change to simplify the training differences, minimum change to reduce costs, and to get it done quickly."³⁰ As described more fully below, this "ground rule" caused Boeing to decide to hide the operation—and even the existence—of MCAS from Timaero or other MAX purchasers and their pilots so that they would not even suspect that additional training might be necessary.

- 95. Boeing officials recognized that disclosing MCAS's existence to customers would result in "a greater certification and training impact" as early as 2013 so they intentionally concealed this design and put passenger safety at risk. Documents made public by Boeing map out Boeing's strategy of deception about MCAS, for example directing that it could be referred to by name only within Boeing, but to the outside world directing that it be called an "addition to speed trim." 31
- 96. In a redacted email dated May 4, 2013 addressed to "BCA Senior Chiefs and Functional Leaders," a Boeing employee disclosed a "current list of the remaining 14 open significant trade studies/risk issues," which included "Differences Pilot Training: Ensuring

²⁹ David Gelles, Natalie Kitroeff, Jack Nicas, and Rebecca R. Ruiz, "Boeing Was 'Go, Go, Go' to Beat Airbus With the 737 Max" New York Times Mar. 23, 2019, https://www.nytimes.com/2019/03/23/business/boeing-737-max-crash.html.

 $^{^{30}}$ *Id*.

³¹ Jamie Freed and Tracy Rucinski, "Factbox: In Boeing internal messages, employees distrust the 737 MAX and mock regulators," Reuters, Jan. 9, 2020, https://www.reuters.com/article/us-boeing-737max-factbox/factbox-in-boeing-internal-messages-employees-distrust-the-737-max-and-mock-regulators-idUSKBN1Z90NP.

that the level of change on the 737 MAX keeps the [d]ifferences to 16 hours or less of Level B training. Concerns include the impact of . . . the Autopilot roll saturation change driven by the addition of MCAS to the flight controls system."³² Boeing also knew since at least 2013 that the FAA was "struggling to approve [Boeing's] application position regarding flight deck alerting."³³

- 97. On June 7, 2013, a Boeing employee wrote to colleagues in an email, "If we emphasize MCAS is a new function there may be greater certification and training impact...Externally we would communicate it is an addition to Speed Trim...Internally continue using the acronym MCAS..." *Id.* at 93.
- 98. In a July 2014 email chain, a Boeing employee suggested that guidance should be given to pilots on how to respond to a certain alert. Mr. Forkner, Boeing's 737 MAX Chief Technical Pilot and Boeing's primary correspondent with the FAA related to pilot training for the 737 MAX, responded that Boeing could not provide such instructions as that could result in additional pilot training and that is "the box we're painted into with the Level B training requirements" (no simulator training). Exhibit 5 at 3. "A bad excuse, but what I'm being pressured into complying with." *Id*.
- 99. Boeing employees acting within the scope of their employment met several times with Timaero representatives to market and sell the 737 MAX.

³² U.S. Congress Hearing Before the Committee on Transportation and Infrastructure House of Representatives. "The Boeing 737 Max: Examining the Design, Development, and Marketing of the Aircraft" (Date: Oct. 30, 2019) page 133; Text From: Congress.gov.

³³ *Id*.

100. On June 19, 2013, Ray Conner (President and CEO of Boeing Commercial Airplanes) and Vyacheslav Soloviev (on behalf of Timaero) entered into a letter of intent in Le Bourget, France to purchase (20) 737 MAX aircraft valued at more than \$2 billion. The parties then negotiated the terms of the Purchase Agreement.

101. In a draft news release dated June 19, 2013 reflecting Timaero's commitment to purchase the aircraft, Boeing wrote, "[t]he 737 MAX incorporates the latest engines . . . to deliver the highest efficiency . . . in the single-aisle market . . . [a]irlines operating the 737 MAX will see a 13 percent fuel-use improvement over today's most fuel efficient single-aisle airplanes" Boeing's draft press release was sent via email on June 18, 2013 by Alexander Basyuk (Boeing Sales Director, Russia), Elena Alexandrova (Boeing Communications Director, Russia), and Dmitry Krol (Boeing Regional Director Communications) to Timaero representatives Vyacheslav Soloviev and Ivan Vasyukov.

102. On August 12, 2013, Mr. Basyuk and Jorge Molina Acosta (Boeing Regional Marketing Director) met in Moscow with Mr. Soloviev and Mr. Vasyukov from Timaero. Mr. Acosta specifically flew from Seattle to give Timaero a presentation on the 737 MAX and discuss Boeing's sale proposal. On August 19, 2013, Mr. Basyuk gave a presentation on the 737 MAX to Timaero representatives in Moscow. On September 12, 2013, Mr. Basyuk) met again in Moscow with Mr. Soloviev and Mr. Vasyukov, to further discuss the 737 MAX. On November 10-14, 2013, Timaero representative Igor Komlev met with Boeing representatives, including George Peppes (Boeing Regional Marketing Director), in Muscat, Oman regarding the 737 MAX. On November 21, 2013, Boeing representatives, including Mr. Acosta, Jordan Weltman, Mher Papyan, Tim Myers,

Anastasia Ivanischeva, and Richard Hammond, met in Moscow with Timaero representatives, Igor Komlev and Ivan Vasyukov, relating to the 737 MAX.

- 103. Boeing further marketed the 737 MAX's advantages, including its fuel efficiency, in business proposals sent via email dated August 8, 2013 and September 12, 2013 from Mr. Acosta, Mr. Basyuk, Christopher Brown, Alexander Jabenko (Sales Program Manager), , and Mher Papyan (Finance Director) to Timaero representatives Vyacheslav Soloviev and Ivan Vasyukov.
- 104. Boeing represented—including during the above-referenced meetings with Timaero representatives—that the 737 MAX would not require additional simulator training for pilots already certified to fly its predecessor 737 NG (Level B non-simulator pilot training requirements), and would be airworthy, safe, free from design defects, and in compliance with appropriate aviation regulations. Timaero relied on each of these representations in deciding whether to purchase any 737 MAX aircraft. Timaero would not have purchased any 737 MAX aircraft, executed the Purchase Agreement, executed the Supplemental Agreements, or accepted delivery of any aircraft had Boeing disclosed the information in Boeing's possession and control identified in this complaint.
- 105. A November 19, 2013, Boeing 737 MAX Overview presentation by Scott Fancher (Vice President and General Manager Airplane Development Boeing Commercial Airplanes) and Randy Tinseth (Vice President Marketing Boeing Commercial Airplanes) states the 737 MAX would be "14% more fuel efficient" over the previous 737 NG and operating the 737 MAX would be similar to the 737 NG for pilots.

- 106. Boeing oversold the benefits of the MAX while underplaying, denying, or failing to disclose material dangers. This is consistent with Boeing's self-described practice of having its sales force "lie [to purchasers] about how awesome our airplanes were."³⁴
- 107. Timaero relied on each of the above statements in deciding whether to execute the Purchase Agreement.

G. Timaero and Boeing Execute a Purchase Agreement

- 108. On January 10, 2014, Boeing and Timaero entered into Purchase Agreement Number PA-04022 ("Purchase Agreement") for the purchase and sale of twenty (20) Boeing Model 737-8 aircraft ("737 MAX").³⁵
- 109. On January 10, 2014, Timaero secured a loan to satisfy its financial obligations under the Purchase Agreement.
- 110. The Purchase Agreement incorporated the terms and conditions of the Aircraft General Terms Agreement dated January 10, 2014, identified as VEB-AGTA.
- 111. Sean McCreery, a Director of Timaero, signed the Purchase Agreement based on Boeing's representations above, including for instance Boeing's fraudulent misrepresentations concerning Level B non-simulator training and proper and valid certification of the 737 MAX.

³⁴ Michael Laris, "Messages show Bowing employees knew in 2016 of problems that turned deadly on the 737 MAX," The Washington Post, Oct. 18, 2019, https://www.washingtonpost.com/local/trafficandcommuting/text-messages-show-boeing-employees-knew-in-2016-of-problems-that-turned-deadly-on-the-737-max/2019/10/18/8578c990-f1ca-11e9-89eb-ec56cd414732_story.html.

³⁵ The Purchase Agreement and exhibits and the Supplemental Agreements thereto contain Boeing's confidential business information. Accordingly, Timaero does not attach them here. Timaero can file these documents under seal at the Court's request, if Boeing does not agree to waive confidentiality for the purposes of this litigation.

- 112. The Purchase Agreement also incorporates numerous letter agreements, tables, exhibits, and the Supplemental Agreements, as explained herein.
- 113. The Purchase Agreement provides in relevant part that "Boeing will manufacture each aircraft to conform to the appropriate Type Certificate issued by the United States Federal Aviation Administration (FAA) for the specific model of aircraft and will obtain from the FAA and furnish to Customer at Delivery of each aircraft either a Standard Airworthiness Certificate or an Export Certificate of Airworthiness issued pursuant to Part 21 of the Federal Aviation Regulations." Boeing did not comply with these requirements. Had Timaero known of Boeing's noncompliance, Timaero would not have purchased or accepted delivery of the aircraft.
- 114. Boeing and Timaero expressly contracted in the Purchase Agreement that no additional simulator training would be required for 737 NG pilots: Section 2, titled "Flight Training," of Supplemental Exhibit CS1-1 to the Purchase Agreement states, "737 MAX transition training will consist of the following...737 MAX differences training course" and the "training materials" include "737 MAX Pilot Differences Computer Based Training courseware." Supplemental Exhibit CS1-2 to the Purchase Agreement at Section 2, titled "Flight Training," also states, "Boeing will provide flight crew differences training to acquaint . . . students . . . with operational, systems and performance differences between Customer's newly-purchased Aircraft and an aircraft of the same model currently operated by Customer" and the "[t]raining materials" provided include "Flight Differences Computer Based Training Courseware."
- 115. Timaero relied on this representation, among others, in deciding whether to execute the Purchase Agreement.

- 116. Boeing did not disclose to Timaero prior to execution of the Purchase Agreement in January 2014 that MCAS's use on the 737 MAX was new and novel as to the 737 MAX aircraft. Boeing did not disclose to Timaero that MCAS's use on the 737 MAX would jeopardize a Level B differences training determination by the FAA. To the contrary, Boeing misrepresented in the Purchase Agreement that the 737 MAX would only require Level B differences training. Had Boeing disclosed the truth about MCAS to Timaero it would not have executed the Purchase Agreement.
- 117. Boeing did not disclose to Timaero that the version of MCAS installed on KC-46A differed from the version of MCAS installed on the 737 MAX. Boeing did not disclose to Timaero that MCAS on the 737 MAX controlled the aircraft's movement in a new way. Exhibit 6, "JATR," at 13-14. Boeing did not disclose to Timaero that MCAS on the 737 MAX controlled the aircraft's movement in a new way such that Boeing would not be able to secure Level-B differences training for the 737 MAX. To the contrary, Boeing misrepresented in the Purchase Agreement that the 737 MAX would only require Level B differences training. Had Boeing disclosed the truth about MCAS to Timaero it would not have executed the Purchase Agreement.
- 118. Boeing promised as of January 10, 2014 to deliver 20 aircraft that required only Level B non-simulator training. However, Boeing knew that its representations were not true and that its promise to deliver 20 aircraft from the 2014 Purchase Agreement with only Level B non-simulator training would not be fulfilled. Boeing never intended that its promises would be fulfilled. Timaero relied on Boeing's misrepresentations in executing the Purchase Agreement. Timaero would not have entered into the Purchase Agreement had Boeing disclosed that the truth about MCAS disclosed herein.

- 119. After signing the Purchase Agreement, Boeing continued to make the same representations to Timaero that it had made prior to execution of the Purchase Agreement, including misrepresentations concerning differences training for the 737 MAX.
- 120. On January 21, 2014, Alexander Basyuk (Boeing Sales Director, Russia) met with Timaero representative Ivan Vasyukov in Moscow relating to converting Timaero's orders for 737-800 aircraft to 737 MAX.
- 121. On January 28, 2014, Jorge Molina Acosta (Boeing Regional Marketing Director) met with Timaero representatives Ivan Vasyukov and Igor Komlev in Moscow. Mr. Acosta gave a presentation entitled, "737 MAX X Overview," and presented the "advantage[s]" of the 737 MAX.
- Igor Komlev to Boeing's Seattle facilities. During this trip, Mr. Komlev met with numerous Boeing representatives, including Stephen Clark (Business Director), Charles Leach (Managing Director, Commercials Airplanes Contracts), Karl Hamavand (Customer Engineer), Wes Bare (Boeing), Jorge Molina Acosta (Boeing Regional Marketing Director), Matthew Wilks (Vice President Customer Support), Francois Siki (BCA Contracts), Alexander Jabenko (Sales Program Manager), Frank Wolz (Regional Manager, Customer Engineering), and Mher Papyan (Finance Director). In the course of these meetings, Boeing representatives marketed the 737 MAX as not requiring additional simulator training for pilots already certified to fly its predecessor 737 NG (Level B non-simulator pilot training requirements), and further represented that the aircraft would be airworthy, safe, free from design defects, and in compliance with appropriate aviation regulations.

- 123. A July 2014 Boeing press release states, "Pilots already certified on the Next-Generation 737 will not require a simulator course to transition to the 737 MAX." Unknown to customers, including Timaero, Boeing did not have any FAA approval or agreement on the 737 MAX's level of training to make such statements.
- by the FAA, specifically whether the 737 MAX would warrant additional simulator training for 737 NG pilots. Despite this, Boeing purposely misled customers, including Timaero at, during, around, and prior to execution of the Purchase Agreement and the Supplemental Agreements, that the 737 MAX would not require additional simulator training for 737 NG trained pilots because this was an important cost saving and selling feature.
- 125. Consistent with the foregoing representations to Timaero, Boeing marketing materials provided to customers state that "integrating the new 737 MAX is an easy proposition. As you build your 737 MAX fleet, millions of dollars will be saved because of its commonality with the Next-Generation 737":

Airlines ask for an airplane that fits smoothly in today's fleet	
Because of the 737's popularity with airlines everywhere around the world, integrating the new 737 MAX is an easy proposition. As you build your 737 MAX fleet, millions of dollars will be saved	
because of its commonality with the Next-Generation 737, ease of maintenance, wide availability of 737 pilots, and the global infrastructure that supports the aircraft in operation.	3

³⁶ <u>See https://boeing.mediaroom.com/2014-07-11-Boeing-Selects-Supplier-for-737-MAX-Full-Flight-Simulator.</u>

³⁷ Easy To Operate, BOEING, http://www.boeing.com/commercial/737max/by-design/#/operational-commonality.

Boeing consistently represented that the 737 MAX would not require simulator training, in spite of the fact that Boeing knew its modifications from the old 737 certification would require such training, because Boeing intended to mislead the FAA to obtain the non-simulator certification and mislead customers, including Timaero, into buying 737 MAX aircraft in reliance upon Boeing's misrepresentations.

126. Boeing's representations to Timaero directly led to Timaero entering into the Purchase Agreement and the Supplemental Agreements (discussed below). Boeing knew these representations were false and misleading. In fact, Boeing's fraudulent marketing campaign has since been revealed, as "Boeing is [now] recommending 737 MAX simulator training in addition to computer-based training for all MAX pilots prior to return to service of the 737 MAX." MAX."

127. Boeing advertised and communicated to customers, including Timaero at, during, around, and prior to execution of the Purchase Agreement and the Supplemental Agreements, that the 737 MAX would not require additional simulator training for 737 NG certified pilots, and there would be no major differences between the 737 MAX and its predecessor 737 NG. However, Boeing knew or should have known that these representations were false, misleading, and/or in reckless disregard of the truth. In an internal FAA email dated May 10, 2015, an FAA employee stated, "[w]e have reason to believe that Boeing's assessment of B Level training differences (Computer Based Training) between the MAX and NG will be insufficient. This has been communicated to Boeing over the past two years [since 2013] through a series of formal letters and

³⁸ https://boeing.mediaroom.com/news-releases-statements?item=130596.

issue Papers."³⁹ The FAA employee further stated that "Boeing is advertising and communicating to their customers what they 'desire' on issues that have not yet been evaluated. The 737 MAX is not a simple derivative of its previous model. It is a very complex modification incorporating many new and novel features . . . Boeing is doing everything they can to be exempt from the new certification rules and keep the aircraft the same type rating with minimal training differences."⁴⁰

has continually argued with the [FAA] that they cannot meet the latest amendments of aircraft certification regulations due to the impact on flight crew training," and "that computer based training is sufficient to train pilots currently qualified on the NG to the MAX differences." The FAA "disagree[d] with this assessment" because "[a]s the [737 MAX] project has evolved, Boeing has been forced to make several substantial systems changes..." Despite the FAA's position, however, Boeing continued to represent to customers, including Timaero at, during, around, and prior to execution of the Purchase Agreement and the Supplemental Agreements, that the 737 MAX would not require additional simulator training for pilots already certified to fly its predecessor 737 NG (Level B non-simulator pilot training requirements). As discussed below, from the beginning of

³⁹ U.S. Congress Hearing Before the Committee on Transportation and Infrastructure House of Representatives. "The Boeing 737 Max: Examining the Design, Development, and Marketing of the Aircraft" (Date: Oct. 30, 2019). Text from: Congress.gov; page 232.

⁴⁰ *Id*.

⁴¹ U.S. Congress Hearing Before the Committee on Transportation and Infrastructure House of Representatives. "The Boeing 737 Max: Examining the Design, Development, and Marketing of the Aircraft" (Date: Oct. 30, 2019) page 236; Text From: Congress.gov.

⁴² *Id*.

the 737 MAX program, Boeing set out on a scheme to hide from and/or misrepresent material information to the FAA and its customers, including Timaero, and to wrongfully induce and/or mislead (in Boeing's words, "Jedi-mind trick") the FAA into believing that no additional simulator training for 737 NG pilots was required.

129. As a result of Boeing's misrepresentations and omissions to its customers, including Timaero, that no additional simulator training would be required, Boeing's management and its misguided marketing led the aircraft's design—not the engineers. In fact, as shown herein, Boeing's management purposely concealed and recklessly ignored the advice of its engineers. Pressures from Boeing senior management forced employees to do all that was necessary to ensure the 737 MAX's design and regulatory approval matched its marketing and selling promises. These actions led to an unsafe design, and an unwarranted certification. Boeing purposely misrepresented and withheld critical information from and deceived the FAA, foreign regulators, and Boeing customers, including Timaero, that would have revealed that a Level B non-simulator differences training determination was not possible, and that simulator training was in fact required.

H. Boeing Updates MCAS to Expand its Use, Ignores Safety Protocols, and Fails to Disclose Critical Design Changes to Timaero or the FAA or the EASA During the Design and Development of the 737 MAX

- 130. Rather than concede the truth that additional pilot training would be needed, Boeing intentionally altered the MCAS design to get the system certified quickly and improperly without additional pilot training despite knowing such training should be required. Boeing:
 - removed the two AOA sensor design, and instead relied on a single AOA sensor to trigger MCAS, which removed a known safeguard, was against industry norm and regulations, and differed from the version installed on

- KC-46A, all in defiance of Boeing's own historical practices and Boeing engineers' warnings;
- secretly expanded the MCAS's operating conditions to control the aircraft in both low- and high-speed environments;
- secretly expanded the MCAS's authority to move the aircraft's tail by more than 300%;
- did not disclose necessary and relevant information about the MCAS's expansion to the Flight Technical Team, including Mr. Forkner, who was principally responsible for providing all information that was relevant to the FAA AEG for determining differences-training;
- wrongfully induced and/or misled (in Boeing's words, "Jedi-mind tricked") regulators into deleting references to the MCAS in the flight operating manuals and wrongfully induced and/or misled customers into believing that additional simulator piloting training was not necessary (for example, specifying in purchase agreements that only DVD-based "differences training" would be provided for 737-NG qualified pilots); and
- removed an indicator light for MCAS failure to avoid further pilot training.
- 131. These MCAS alterations were, upon information and belief, developed in 2015 based on testing and analyses that occurred between approximately 2012-2014. Exhibit 3 at 13-17. Thus, upon information and belief, Boeing knew at least as early as 2012 to early 2014 that an expansion of MCAS was required and that utilization of MCAS made false Boeing's promise to deliver 20 aircraft to Timaero that would require only Level B non-simulator training. Upon information and belief, Boeing knew its promises to Timaero were false and never intended to fulfill them when Timaero executed the Purchase Agreement.
- 132. In or around June 2015, Mr. Forkner and other Boeing employees briefed the FAA AEG on MCAS. During this briefing, Boeing described MCAS as a system that could only activate during a high-speed, wind-up turn. After the briefing, Mr. Forkner and another Boeing employee further discussed MCAS with an FAA AEG employee ("FAA")

AEG Employee-1") and reiterated to FAA AEG Employee-1 the limited operational scope of MCAS. DPA-A ¶ 24.

- 133. Upon information and belief, at this time Boeing was actively altering MCAS to expand its use based on testing and analysis that occurred between approximately 2012-2014.
- 134. Subsequently, in March 2016, Boeing expanded MCAS's operational scope, including the speed range within which MCAS could activate, significantly altering its original design. Among other things, when the airplane registered a high angle of attack, the change expanded the speed range within which MCAS could activate from approximately Mach 0.6-0.8 to approximately Mach 0.2-0.8—that is, from only high-speed flight to nearly the entire speed range for the 737 MAX, including low-speed flight, which generally occurs at a lower altitude and in and around takeoff and landing. Boeing disclosed this expansion to FAA personnel, but only to those personnel who were responsible for determining whether the 737 MAX met U.S. federal airworthiness standards. Boeing did not disclose the expansion to the FAA AEG personnel responsible for publishing the 737 MAX FSB Report and making the training-related determination. DPA-A ¶ 25.
- 135. Throughout the time that Boeing was implementing and modifying MCAS, Boeing made dozens of filings with EASA for supplemental type certificates on 737 series planes related to, e.g.: in flight entertainment systems; seat belts; a cargo door latch; a WiFi upgrade; cabin reconfigurations; a coffee maker; and a vacuum toilet. Not once in EASA's log of Supplemental Type Certificates does there appear an STC for changes to 737-MAX or 737-8 flight controls. **Boeing did not disclose MCAS, or its defects, to EASA.**

- 136. David Loffing, a Boeing executive and director of the Airplane Level Integration Team, was responsible for "integration," i.e., making sure the engineering department sent all relevant information to the Flight Technical Team, including Mr. Forkner, so that such information was provided to the FAA AEG.
- 137. However, the engineering department, under Mr. Loffing's management, did not update documents to communicate the MCAS's expansion to low speeds to the Technical Flight Team or the FAA.
- 138. Boeing utilizes Coordination ("COORD") Sheets as the primary method for the engineering department to communicate changes of the aircraft to other departments. The engineering department documented and communicated the MCAS's expansion to low-speed flight in a COORD Sheet dated March 30, 2016. The engineering department never sent this March 30, 2016 COORD Sheet to Mr. Forkner.
- Document ("CSID"). This document is produced by the engineering department to communicate and help support creating the systems' descriptions in the flight crew training manuals and FCOM, and used by the Flight Technical Group. Mr. Forkner received a CSID eight days before the MCAS's expansion, which stated that it only operated at high-speed pitch up, load factor 1.3 G, which is not at low-speed. In August 2016 and March 2019, Mr. Forkner received additional CSIDs from the engineering department, which also described the MCAS as operating only at high-speeds.
- 140. After the engineering department expanded the MCAS to operate at low speeds, Mr. Loffing and his engineering group made three reports to the FAA that inaccurately described the MCAS as operating only at high-speed, wind-up turns.

- 141. As a result of a Boeing internal investigation after the Lion Air crash, Mr. Loffing described the documents above, and others, as incomplete and inconsistent.
- 142. Not a single official Boeing document, email, or documented communication shows that Mr. Forkner was informed of the MCAS's expansion so that he could communicate it to the FAA.
- November 2016 and January 2017. During this undocumented telephone call Mr. Loffing alleges that he told Mr. Forkner that MCAS was expanded to operate at low speeds down to Mach 0.2. There are no records of this telephone conversation occurring and such a telephone conversation is not Boeing's primary means for communicating engineering changes of an aircraft to other departments, such as the Flight Technical Team.
- 144. After the alleged telephone conversation between Mr. Loffing and Mr. Forkner, Mr. Loffing (as the executive in charge of integration) did nothing to address the issue that his Chief Technical Pilot did not know about the expanded operational scope of MCAS. For example, the Mr. Loffing did not call any meetings, did not call Mr. Forkner's boss, did not call up his boss (Mr. Leverkuhn, Vice President and General Manager of the 737 MAX Program), did not call anyone in the engineering department, did not call any test pilots, did not send the relevant COORD Sheet or any documents regarding the MCAS's expansion to Mr. Forkner, did not ensure MCAS's expansion was communicated to the FAA AEG, and did not conduct any follow-ups with Mr. Forkner.
- 145. Upon information and belief, FAA officials have stated that the problems with MCAS were caused by a failure of Boeing's engineering department and the engineering certification under 14 CFR Part 25.

- 146. Furthermore, in or around January 2016, Boeing completed a Single and Multiple Failure document for the 737 MAX. Exhibit 3 at 18. Boeing considered this failure probability analysis an internal document only and did not submit it as a required certification deliverable. Boeing did not provide it to FAA. According to FAA, some aspects of Boeing's analysis from the Single and Multiple Failure document should have been included in system safety assessments later provided to the Agency as certification deliverables.
- 147. Boeing's analysis identified 75 failure cases to assess the potential impacts of those failure scenarios on the aircraft and flight crew. Boeing's Single and Multiple Failure analysis found all 75 potential failure cases to be acceptable.
- 148. One potential failure case involved the loss of one AOA sensor—an external sensor that measures the angle of the aircraft in the air—followed by faulty AOA data in the other sensor. (*See* figure 8, which shows the location of AOA on the 737 MAX aircraft.)
- 149. However, despite identifying this failure case and deeming it catastrophic, Boeing determined this failure case was acceptable because the probability of occurrence was determined to be extremely remote, and it was assumed the crew would recognize the situation and take appropriate action. While this failure test case may not be exactly the same as the circumstances encountered in the Lion and Ethiopian Air accidents, erroneous AOA data—potentially caused by the failure of one AOA sensor—was a factor present in both accident scenarios. Exhibit 3 at 19.

- 150. During its Single and Multiple Failure analysis, Boeing rated this potential failure case as "catastrophic" but also determined that the low probability of occurrence meant it qualified as acceptable. Boeing also rated 11 other potential failure cases as catastrophic but ultimately deemed them acceptable based on probability and engineering judgement.
 - 151. Boeing's 737 MAX 8 flight testing began in January 2016. Exhibit 3 at 20.
- 152. By at least March 30, 2016, Boeing completed MCAS "Revision D," which changed the parameters under which MCAS would activate to include the much slower airspeeds. Exhibit 3 at 20-21. It also increased the maximum range of MCAS from 0.55-degrees to 2.5-degrees, an increase of over 300 percent. ⁴⁴ This meant that each time MCAS activated, it could push the nose of the aircraft downward with a maximum range of 2.5-degrees of movement. ⁴⁵
- 153. Following Revision D, MCAS could now activate at speeds of 0.2 to 0.84 Mach, whereas it could previously only activate at speeds above 0.60 Mach.⁴⁶
- 154. Upon information and belief, the information that led to the decision to design and implement Revision D was known to Boeing prior to and/or near in time to

⁴³ FAA Advisory Circular 25.1309.1A classifies risk ratings as: Minor (failure conditions which would not significantly reduce airplane safety and which involve crew actions that are well within their capabilities), Major (failure conditions which would reduce the capability of the airplane or the ability of the crew to cope with adverse conditions), Hazardous (failure conditions which would reduce the capability of the airplane or the ability of the crew to cope due to physical distress or excessive workload), and Catastrophic (failure conditions which would prevent continued safe flight and landing).

⁴⁴ *Id*.

⁴⁵ *Id*.

⁴⁶ *Id.* at 20 n.35.

Timaero's execution of the Purchase Agreement following testing and analyses conducted during approximately 2012-2014 and following software developments during 2015. Thus, upon information and belief, Boeing knew that an expansion of MCAS was required prior to and/or near in time to Timaero's execution of the Purchase Agreement.

155. In a rush to fix known problems, Boeing decided to expand the use of MCAS to lower-speed situations, including during takeoff. Boeing also allowed the tail stabilizer to move up to 2.5-degrees in 10 seconds, over 4 times faster than previously designed.⁴⁷ This allowed MCAS to work at lower speeds where additional movement of the horizontal stabilizer is required to steer. Maximum nose down of the horizontal stabilizer could now be achieved in only two iterations of MCAS activation.

156. Boeing also removed the G-force threshold for activating MCAS, causing it to be triggered by only the single angle-of-attack ("AOA") sensor. As originally designed, MCAS relied on both an Angle of Attack ("AOA") vane and a G-Force meter for this purpose so that it would activate only when the AOA vane and the G-force meter both sensed an impending high-G stall.⁴⁸ To make MCAS activate during low-G maneuvers, Boeing eliminated MCAS's dependence on a G-force meter and left it completely dependent on the AOA vane as the single source of information about when MCAS should aggressively push the nose down.

⁴⁷ Jack Nicas, David Gelles, and James Glanz, "Changes to Flight Software on 737 Max Escaped F.A.A. Scrutiny," New York Times Apr. 11, 2019, https://www.nytimes.com/2019/04/11/business/boeing-faa-mcas.html.

⁴⁸ Dominic Gates and Mike Baker, "The inside story of MCAS: How Boeing's 737 MAX system gained power and lost safeguards," Seattle Times, June 22, 2019, https://www.seattletimes.com/seattle-news/times-watchdog/the-inside-story-of-mcas-how-boeings-737-max-system-gained-power-and-lost-safeguards/.

157. When they work, AOA vanes provide a direct reading of when an aircraft is nearing or entering a stall – but they are prone to malfunction. Despite the fact that the 737 MAX has two AOA vanes, Boeing designed MCAS to rely on only one of the AOA vanes during flight. Also, Boeing failed to include self-diagnostic software in MCAS that would have allowed it to detect and deactivate an obviously malfunctioning AOA vane. Finally, Boeing programmed MCAS so that it reset itself five seconds after every application of pitch-down stabilizer trim – and never stopped as long as MCAS believed the aircraft was close to stalling. Thus, a system that should have had triple-redundancy was designed by Boeing to rely on a single prone-to-failure sensor with no redundancy whatsoever.

158. Boeing employees recognized the danger of changing MCAS to rely on a single AOA sensor that could malfunction. Boeing considered adding a cockpit alert that would tell pilots when MCAS was engaged, but ultimately decided not to include the alert.⁵² In 2015, an engineer raised concerns that the system was vulnerable to malfunctioning because it relied on a single sensor, but those concerns were ignored.⁵³

⁴⁹ *Id*.

⁵⁰ The recklessness of this flaw is apparent from the Ethiopian Air crash, where the broken AOA sensor was reporting an angle of attack of 75 degrees or more and MCAS was not programmed to recognize that it is physically impossible for a MAX to have an angle of attack of more than approximately 20 degrees.

⁵¹ Dominic Gates, "Flawed analysis, failed oversight: How Boeing, FAA certified the suspect 737 MAX flight control system," Seattle Times, Mar. 17, 2019, https://www.seattletimes.com/business/boeing-aerospace/failed-certification-faa-missed-safety-issues-in-the-737-max-system-implicated-in-the-lion-air-crash/.

⁵² David Gelles and Natalie Kitroeff, "Documents Show Safety Concerns at Boeing Before Deadly Crashes," New York Times, Oct. 30, 2019, https://www.nytimes.com/2019/10/30/business/boeing-muilenburg-testimony-congress.html.

⁵³ *Id*.

- AOA sensors as a safeguard—despite Boeing's design requirements and despite Boeing representing to the FAA that an AOA Disagree Alert with two AOA sensors to sense a malfunctioning AOA sensor would be a standard, non-optional feature. Boeing failed to inform the FAA or Timaero that the aircraft did not conform to the approved design.
- 160. By at least March 2016, Boeing also chose not to notify pilots that the MCAS was operating on the 737 MAX. Boeing chose to remove MCAS from the flight crew operations manual (FCOM), which is the master description of the aircraft for pilots.
- 161. Mark Forkner sent a March 30, 2016 email to senior FAA officials requesting to remove MCAS from the pilot's manual. Boeing never reported that MCAS had been redesigned to operate at lower flight speeds to the FAA. Instead, FAA officials had only been informed regarding the original version of MCAS, represented by Boeing to be benign. Relying on Boeing, the FAA approved Boeing's request.
- 162. A report of the Joint Authorities Technical Review Board dated October 11, 2019 ("Joint Report") found that Boeing, beginning in March 2016, was reporting "information and discussions about MCAS...[in] fragment[s] [that] were delivered to disconnected groups within the process." Exhibit 4 at 13-14.⁵⁴ Importantly, Boeing purposely started this practice after it made changes to the original MCAS design in "early 2016", as discussed above, to prevent the FAA from realizing the flight control was different

⁵⁴ Joint Authorities Technical Review (JATR), Boeing 737 MAX Flight Control System: Observations, Findings, and

Recommendations. Submitted to the Associate Administrator for Aviation Safety, U.S. Federal Aviation Administration on October 11, 2019, https://www.faa.gov/news/media/attachments/Final_JATR_Submittal_to_FAA_Oct_2019.pdf.

and novel. (*Id* at 13-14, 47.) The Joint Report concluded that "it was difficult [for the FAA] to recognize the impacts and implications of this system. If the FAA technical staff had been fully aware of the details of MCAS function, the JATR team believes the agency likely would have required an issue paper..." *Id*. at 13-14.

- 163. Boeing knew that the tail stabilizer limit of 2.5-degrees was higher than the original 0.6-degree limit specified in the original safety analysis, and that it was not designed or intended to be used at lower speeds, including during takeoff.
- 164. On or about August 15, 2016, Boeing released the version of the flight control computer software that it intended to use as the final version on the 737 MAX. This software revision included the version of MCAS that had the ability to push down the nose of the aircraft with a maximum movement of 2.5-degrees. Exhibit 3 at 22.
- 165. On or about August 16, 2016, the FAA AEG issued a provisional "Level B" differences-training determination for the 737 MAX. At the time of this provisional determination, Boeing did not disclose to the FAA AEG, nor was the FAA AEG aware, that Boeing had expanded MCAS's operational scope. DPA-A ¶ 26.
- 166. On or about the same day, Mr. Forkner recognized Boeing's achievement in an email to Boeing employees, including Mr. Gustavsson, and wrote that the FAA AEG's provisional determination "culminates more than 3 years of tireless and collaborative efforts across many business units" and that the 737 MAX program management "is VERY happy." DPA-A ¶ 27.
- 167. As Mr. Forkner and Mr. Gustavsson knew, the FAA AEG based its provisional "Level B" differences training for the 737 MAX in part on its understanding

that MCAS could only activate during the limited operational scope of a high-speed, wind up turn. DPA-A ¶ 28.

168. Mr. Forkner and Mr. Gustavsson also understood, as Mr. Forkner acknowledged in his email on or about August 16, 2016, that the FAA AEG's "Level B" differences determination for the 737 MAX was only a "provisional approval [...] assuming no significant systems changes to the airplane." DPA-A ¶ 29.

169. For example, in an email to Boeing employees including Mr. Gustavsson discussing a potential change to another part of the 737 MAX's flight controls on or about November 10, 2016, Mr. Forkner emphasized that "[o]ne of the Program Directives we were given was to not create any differences [. . .]. This is what we sold to the regulators who have already granted us the Level B differences determination. To go back to them now, and tell them there is in fact a difference [. . .] would be a huge threat to that differences training determination." DPA-A ¶ 30.

I. Boeing's MCAS Design is Deeply Flawed and Defective

170. Boeing's development and testing of MCAS was deeply flawed. As described herein, MCAS's power had to be increased by a factor of four. There are indications that Boeing recognized it was too powerful and made the 737 MAX difficult to control. In November 2016, for example, a Boeing technical pilot complained in an internal message that the system was "running rampant" during flight simulator operation. He also wrote—in a tragic preview of the two fatal MAX crashes—that "the plane is trimming itself like cra[z]y [sic]."55

⁵⁵ Boeing claims that these comments pertain to an unrelated problem with simulator software, but has not produced evidence to support this claim.

171. In order to meet certification requirements, Boeing is required to conduct a "System Safety Analysis" of any new system added to the cockpit and report the results to the FAA. As part of this analysis, Boeing must give one of four rankings to each potential failure mode for the new system: minor, major, hazardous, and catastrophic. "Catastrophic" is defined as a failure that is likely to result in "multiple fatalities and/or loss of the [aircraft]." "Hazardous" is defined as a failure that is likely to result in "serious or fatal injury to a small number of occupants of aircraft (except operator)," and "Major" is defined as a failure that causes "physical distress to occupants of aircraft" but no serious or fatal injuries. If a given system failure is ranked as "catastrophic" or "hazardous," Boeing must show that multiple redundancies or other features make the failure of that system virtually impossible.

172. Boeing's System Safety Analysis for MCAS was dangerously inadequate. Major portions of the System Safety Analysis did not even reevaluate the final version of MCAS – they instead evaluated the previous version, the version used before Boeing increased MCAS's power by a factor of four. ⁵⁶ In addition, Boeing failed to evaluate the fact that a false reading by the single AOA sensor that drove MCAS would not only aggressively push the aircraft's nose down for no apparent reason—it would also set off multiple alarms and cause multiple cockpit instruments to display inaccurate or inconsistent data on critical items such as altitude and airspeed. ⁵⁷ This meant that pilots would need to

⁵⁶ Dominic Gates and Mike Baker, "The inside story of MCAS: How Boeing's 737 MAX system gained power and lost safeguards" Seattle Times, June 24, 2019, https://www.seattletimes.com/seattle-news/times-watchdog/the-inside-story-of-mcas-how-boeings-737-max-system-gained-power-and-lost-safeguards/.

⁵⁷ Dominic Gates, "Flawed analysis, failed oversight: How Boeing, FAA certified the suspect 737 MAX flight control system," Seattle Times, Mar. 17, 2019,

deal with these alarms and misleading data at the same time they were fighting MCAS for control of the aircraft.

Boeing represented to the FAA that if MCAS malfunctioned and 173. commanded nose down trim when the aircraft was not near a stall, MCAS could easily be countermanded or shut off by the pilots via a cutoff switch in the cockpit. They could then, Boeing claimed, safely fly the aircraft using the manual trim wheel that remained in the 737 MAX as a vestige of the original 1967 design. Boeing did not disclose, however, that this conclusion failed to account for MCAS's increased power and the increased trim wheel forces resulting from the 737 MAX's substantially higher weight and thrust.⁵⁸ Boeing also did not evaluate the other changes it made to other MCAS-related cockpit controls that made it difficult for pilots to recognize and counteract a malfunctioning MCAS's aggressive pitch-down commands. Boeing also did not disclose that a MCAS malfunction that occurred while the aircraft was traveling at normal climb or cruise speed would be substantially more dangerous than an MCAS malfunction that occurred at low airspeeds where MCAS was designed to operate. ⁵⁹ Finally, Boeing's safety analysis failed to account for the fact that if the single AOA sensor failed, MCAS would continue to reset itself and attempt to force the nose down every fifteen seconds, and that this aspect of MCAS could put the aircraft into a dive so steep that recovery would be impossible.

https://www.seattletimes.com/business/boeing-aerospace/failed-certification-faa-missed-safety-issues-in-the-737-max-system-implicated-in-the-lion-air-crash/.

⁵⁸ *Id*.

⁵⁹ This is because the amount of force needed to move an aircraft's control surfaces increases by the square of the airspeed, meaning that if MCAS malfunctioned and pushed the nose down during normal flight, the pilots would have to pull approximately four times harder on the controls to counteract this as they would at low speed.

174. Relying on this deeply flawed analysis, Boeing falsely reported to the FAA that an MCAS failure should be ranked as "major" but not "hazardous" or "catastrophic." In other words, Boeing represented to the FAA and other regulators that a malfunctioning MCAS would cause "physical distress to occupants of aircraft," but not "multiple fatalities and/or loss of the [aircraft]." A proper System Safety Analysis would have made clear that Boeing needed to eliminate MCAS entirely, or at the very least rank MCAS failures as "catastrophic" and design MCAS very differently to eliminate any significant risk that it could force an aircraft into an unrecoverable dive.

175. In addition, Boeing successfully lobbied the FAA to waive requirements to add certain cockpit alerts or indicators that would have been required if the 737 MAX were an all-new aircraft. Boeing argued that the costs of adding new indicators and alerts were too high and that such alerts were "impractical" to add to the 50-year-old design of the 737 MAX.⁶⁰

176. Boeing did not perform an additional safety analysis or inform the FAA of its changes to the MCAS design. Boeing never informed the FAA or its customers, including Timaero, of the expansion of MCAS's authority in low-speed situations. Boeing also did not inform the FAA or its customers, including Timaero, that MCAS's control was expanded to move the tail stabilizer from 0.6 to 2.5 degrees in 10 seconds, that MCAS could be triggered successively, or that MCAS would be triggered by only a single angle-of-attack sensor.

⁶⁰ Dominic Gates, Steve Miletech, Lewis Kamb, "Boeing pushed FAA to relax 737 MAX certification requirements for crew alerts" Seattle Times, Oct. 3, 2019, https://www.seattletimes.com/business/boeing-aerospace/boeing-pushed-faa-to-arelax-737-max-certification-requirements-for-crew-alerts/.

177. Boeing knew that the tail stabilizer limit of 2.5-degrees was higher than the original 0.6-degree limit specified in the original safety analysis, and that it was not designed or intended to be used at lower speeds, including during takeoff. Boeing also knew or should have known that safety analyses are required to be updated to reflect the most accurate aircraft information following flight tests. However, Boeing's final safety analysis was not updated to reflect the updated 2.5-degree limit and still contained the 0.6-degree limit, and was not updated with its new function to operate at lower flight speeds.

178. Timaero would not have purchased any 737 MAX aircraft had Boeing disclosed the information in Boeing's possession and control concerning MCAS identified above.

179. Boeing also knew of the fatal flaws of its MCAS and the danger of untrained pilots. As referenced above, in 2016, the chief technical pilot for the 737 MAX told a colleague in a text that MCAS was "running rampant" and was "egregious" in a simulator. Exhibit 7 at 1-2. A June 2018 Boeing document stated that if a pilot took more than ten seconds to react to mistaken MCAS activation, the result could be "catastrophic."

180. As a further example, MCAS relies on a single angle-of-attack sensor, though there are two such sensors on the plane. If the angle-of-attack sensor is damaged, faulty, or provides corrupt data, MCAS can force the 737 MAX into an unrecoverable dive due to this single point of failure. Moreover, use of a single angle-of-attack sensor is another

⁶¹ Alec MacGillis, The Case Against Boeing, THE NEW YORKER (Nov. 11, 2019), https://www.newyorker.com/magazine/2019/11/18/the-case-against-boeing.

way that MCAS, as used on the 737 MAX, differed than KC-46A, which previously utilized MCAS.

In 2014, Boeing's own employees warned of the dangers of a single point of failure. In 2014, Boeing's Chief Test Pilot, Ray Craig, and engineer, Curtis Ewbank, urged Boeing to implement a backup system to detect malfunctioning AOA sensors. According to an ethics complaint Ewbank filed with Boeing, however, Ewbank's request for a safety check was rejected twice by senior executives because of the "cost and potential (pilot) training impact." In 2015, a Boeing employee asked in an e-mail, "Are we vulnerable to single AOA sensor failures with the MCAS implementation or is there some checking that occurs?." Despite this knowledge, Boeing failed to enable a second, already existing, angle-of-attack sensor for use by the MCAS. Boeing also made an alert system, which would detect and notify flight crew of any inconsistencies between the two angle of attack sensors, an optional add-on feature at an additional cost. During the Senate Commerce, Science, and Transportation Committee hearing held on October 29, 2019, Boeing's CEO, Dennis Muilenburg, admitted that as Boeing's own personnel had warned since 2014, Boeing should not have designed MCAS to have only one AOA sensor.

182. Boeing could have easily designed the system to compare the readings from two or more angle-of-attack sensors, but instead, MCAS was designed to take a reading

⁶² Natalie Kitroeff et al. Boeing 737 Max Safety System Was Vetoed, Engineer Says, NEW YORK TIMES, (October 2, 2019), https://www.nytimes.com/2019/10/02/business/boeing-737-max-crashes.html?action=click&module=Top%20Stories&pgtype=Homepage.

⁶³ David Schaper, 3 Takeaways From 2 Days Of Tense Boeing Congressional Hearings, NPR (November 2, 2019), https://www.npr.org/2019/11/02/775553377/3-takeaways-from-2-days-of-tense-boeing-congressional-hearings.

from only one of them. By way of example, Airbus considers AOA sensors to be "safety critical" and installs three sensors on the A320neo. Boeing could have also easily designed a system-check to ensure the angle-of-attack sensor was reading accurately, e.g., ensure the sensor was reading zero on the ground prior to takeoff. However, Boeing did not design or integrate any measures to ensure the MCAS would only activate in response to an accurate reading.

- 183. Boeing knew or should have known that MCAS's reliance on a single angle-of-attack sensor is reckless or negligent, and would lead to catastrophe.
- 184. As a further example, previous versions of the 737 cut electric power to a horizontal stabilizer if a pilot placed resistance against the control column in the opposite direction of the stabilizer's movement. However, when MCAS is activated, this feature is disabled on the 737 MAX.
- 185. Boeing knew or should have known that disabling this feature when MCAS is enabled is reckless or negligent, and would lead to catastrophe.
- 186. As a further example, while activating electric trim control on the yoke may temporarily stop the MCAS's movement of the tail's horizontal stabilizer, the MCAS will reactivate after a few seconds and continue to force the nose down if the angle-of-attack is still sensed as being too high. In other words, the MCAS will trigger a movement of the horizontal stabilizer multiple times in rapid succession. Two cycles of MCAS activation are enough to achieve maximum nose-down effect.
- 187. Boeing knew or should have known that repeated triggering of MCAS is reckless or negligent, and would lead to catastrophe.

188. Notably, the earlier KC-46A's MCAS had none of these flaws. It relied on multiple sensor inputs, had limited authority to move the tanker's nose, and only activated the horizontal stabilizer once, not repeatedly.⁶⁴ Pilots of the tanker can also override MCAS by simply pulling back on controls.⁶⁵

J. Timaero and Boeing Execute Supplemental Agreement No. 1

Agreement No. 1, wherein the parties agreed to convert two (2) Boeing 737-800 aircraft from a prior purchase agreement into two (2) Boeing 737 MAX aircraft. Supplemental Agreement No. 1 was an amendment to and was incorporated into the Purchase Agreement. Supplemental Agreement No. 1 provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect." Therefore, Timaero purchased a total of twenty-two (22) 737 MAX aircraft from Boeing under the Purchase Agreement.

Agreement No. 1 in September 2016 (1) of MCAS's expanded use, (2) that Boeing had withheld disclosure of MCAS's expanded use from the FAA, (3) that MCAS's use on the 737 MAX was new and novel as to the 737 MAX aircraft, (4) that MCAS's use on the 737 MAX would jeopardize a Level B differences training determination by the FAA, (5) that MCAS installed on KC-46A materially differed from the version of MCAS installed on the

⁶⁴ Alison Sider and Andrew Tangel, Before 737 MAX, Boeing's Flight-Control System Included Key Safeguards, THE WALL STREET JOURNAL (Sept. 29, 2019), https://www.wsj.com/articles/before-737-max-boeings-flight-control-system-included-key-safeguards-11569754800.

⁶⁵ *Id*.

737 MAX, and (6) that MCAS on the 737 MAX controlled the aircraft's movement in a new way. To the contrary, Boeing misrepresented in Supplemental Agreement No. 1 that the 737 MAX would only require Level B differences training. Timaero relied on Boeing's misrepresentations in executing Supplemental Agreement No. 1. Had Boeing disclosed the truth about MCAS to Timaero it would not have executed Supplemental Agreement No. 1.

191. Indeed, as explained herein, Boeing secretly expanded MCAS's use six months prior to execution of Supplemental Agreement No. 1, on March 30, 2016, pursuant to Revision D. For the reasons stated herein, Boeing knew that the expansion of MCAS's use on March 30, 2016, and the version of MCAS released on August 15, 2016 precluded Level B non-simulator training in all 22 of the 737 MAX aircraft that were to be delivered to Timaero under the Purchase Agreement. Boeing thus knew at least as early as March 30, 2016 and/or August 15, 2016 that it could not deliver aircraft to Timaero that only required Level B non-simulator training. Nevertheless, Boeing represented as of September 15, 2016 in Supplemental Agreement No. 1 that "all other terms and conditions of the [2014] Purchase Agreement," including the promise of delivering 20 aircraft that require only Level B non-simulator training, "remain unchanged and [] in full force and effect." Boeing knew that its representation was not true and that its promise to deliver 20 aircraft from the 2014 Purchase Agreement and the 2 aircraft from Supplemental Agreement No. 1 with only Level B non-simulator training would not be fulfilled. Boeing never intended that its promises would be fulfilled. Timaero relied on Boeing's misrepresentation that "all [] terms and conditions of the [2014] Purchase Agreement remain unchanged and are in full force and effect" in executing Supplemental Agreement No. 1. Timaero would not have entered

into Supplemental Agreement No. 1 had Boeing disclosed the information concerning MCAS detailed above.

K. Boeing Knowingly Mischaracterizes a Catastrophic Failure Scenario Related to the 737 MAX

- 192. Boeing also performed a failure analysis for MCAS, during which failure scenarios are determined to be either minor, major, hazardous, or catastrophic. The scenario categorization helps determine the redundancy for an aircraft system. For major failures, no serious injuries are expected, though flight crew may have additional tasks or complexities. Hazardous failures can cause serious and fatal injuries and require multiple sensors if there is a high probability of occurrence during normal flight. Loss of the aircraft is reserved for catastrophic failures.
- 193. Aviation regulations require that safety-critical components have built-in redundancies in case of failure to prevent crashes. In or around November 10, 2016, Boeing purposely and/or recklessly determined that an "unintended MCAS activation" during regular flight would be a major event, but unlikely to happen. Exhibit 3 at 25. As a result, Boeing categorized this MCAS failure as major (not catastrophic). However, MCAS did not meet the requirements for a system with a major or hazardous failure rating as it depended on the reading from a single angle-of-attack sensor without any redundant input or check. Boeing's failure analysis did not consider the effect of multiple actuations of the MCAS. Boeing's analysis also assumed that pilots would react quickly and properly if failure arose.

- 194. Boeing knew or should have known an MCAS failure should have been categorized as catastrophic as a failure was likely to result in injuries and deaths, and thereby had to include the necessary checks and redundancies.
- 195. According to a former Boeing flight-controls engineer, "The combination of air data, stall warning and MCAS persistent malfunction should have been declared CATASTROPHIC." Further, the Joint Report, concluded that Boeing's assumptions it took to make an MCAS malfunction a "major failure" were "not [] standard [in the] industry." Exhibit 6 at 17. The Joint Report also found that Boeing failed to perform a complete workload assessment, and its design and analysis did not account for real cockpit conditions. In addition, the Joint Report found that "MCAS was not assess[ed]" for compliance with regulatory Section 25.1302, 67 while Boeing represented that it was.
- 196. Upon information and belief, FAA officials have stated that the MCAS's reliance on a single AOA sensor is not in compliance with Section 25.1302.

L. Boeing Concealed MCAS's Expanded Use from Regulators and Customers, Including Timaero

197. Communications released by Boeing show that Boeing's Chief Technical Pilot, Mark Forkner, knew that MCAS was active at low speed and low Mach conditions ("M.2"), despite his previous statements to the FAA to the contrary, after the 737 MAX exhibited the pitch-up problem described above during low-speed, low-G maneuvers.⁶⁸

⁶⁶ Peter Lemme, Flawed Assumption Pave a Path to Disaster, Satcom Guru (October 28, 2019) https://www.satcom.guru/2019/10/flawed-assumptions-pave-path-to-disaster.html.

⁶⁷ 14 CFR § 25.1302 requires an applicant to show that the aircraft's systems are "designed so that qualified flightcrew members trained in their use can safely perform all the tasks associated with the systems' and equipment's intended functions."

⁶⁸ Dominic Gates and Mike Baker, "The inside story of MCAS: How Boeing's 737 MAX system gained power and lost safeguards," Seattle Times, June 22, 2019,

	198.	On or about November 15, 2016, during a test flight of the 737 MAX in a
simula	tor, Mr.	Forkner experienced what Mr. Forkner recognized as MCAS operating at
lower	speed. N	Mr. Forkner further recognized that this lower-speed operation was different
from w	hat Boe	eing had briefed and described to the FAA AEG. DPA-A ¶ 31.

199. On or about that same day, Mr. Forkner and Mr. Gustavsson discussed MCAS in an internal Boeing electronic chat communication, writing in part:

Mr. Forkner: Oh shocker alerT! [sic] / MCAS is now active down to [Mach] .2 / It's running rampant in the sim on me / at least that's what [a Boeing simulator engineer] thinks is happening

Mr. Gustavsson: Oh great, that means we have to update the speed trim description in vol 2

Mr. Forkner: so I basically lied to the regulators (unknowingly)

Mr. Gustavsson: it wasn't a lie, no one told us that was the case DPA-A \P 32.

200. In response to Mr. Forkner's "shocker alerT!" Technical Pilot Patrick Gustavsson, responded, stating that he experienced the same "egregious" behavior, "but on approach." *Id.* at 1-2.

201. However, Boeing never updated the FAA, and failed to inform the FAA or Timaero of its significant changes to MCAS. Rather, Forkner, who was Boeing's liaison with the FAA, was pressured by Boeing senior management to do whatever was necessary

https://www.seattletimes.com/seattle-news/times-watchdog/the-inside-story-of-mcas-how-boeings-737-max- system-gained-power-and-lost-safeguards/.

to get the 737 MAX certified. "Forkner repeatedly indicated to [an] ex-colleague that he feared losing his job if the FAA rejected Boeing's arguments to minimize training." 69

202. At this point, Boeing recognized that the FAA AEG was under the misimpression that MCAS operated only during a high-speed, wind up turn and could not operate at lower Mach speeds, such as at Mach 0.2. Mr. Forkner and Mr. Gustavsson therefore knew, at least as of the time of this chat communication, that the FAA AEG's provisional "Level B" differences-training determination had been based in part on outdated and inaccurate information about MCAS. DPA-A ¶ 33.

203. Boeing also knew that MCAS's expanded operational scope was relevant to the FAA AEG's decisions about the content of the 737 MAX FSB Report, including whether to include information about MCAS. Boeing similarly understood that it was their responsibility to update the FAA AEG about any relevant changes to the 737 MAX's flight controls—such as MCAS's expanded operational scope. DPA-A ¶ 34.

204. Despite knowing that the FAA AEG had issued its provisional "Level B" determination without any awareness that MCAS's operational scope had been expanded to include high angle of attack conditions in nearly the entire speed range of ordinary commercial flight, Boeing did not correct the FAA AEG's understanding of MCAS's operational scope or otherwise ensure that the FAA AEG's "Level B" determination was based on an accurate understanding of MCAS's operation. Instead, Boeing intentionally

⁶⁹ Andy Pasztor et al. Ex-Boeing Pilot Complained of Management Pressure on MAX, Former Colleagues Say, The Wall Street Journal, (October 23, 2019) https://www.wsj.com/articles/ex-boeing-pilot-complained-of-management-pressure-on-max-former-colleagues-say-11571858920.

withheld and concealed from the FAA AEG their knowledge of MCAS's expanded operational scope. DPA-A ¶ 35.

- 205. For example, shortly after the simulated "shocker alert!" test flight described above, Mr. Forkner talked with FAA AEG Employee-1, who asked Mr. Forkner about the simulated test flight. Mr. Forkner intentionally withheld and concealed from FAA AEG Employee-1 the fact that MCAS's operational scope had been expanded beyond what the FAA AEG relied upon when it issued its provisional "Level B" differences-training determination for the 737 MAX. DPA-A ¶ 36.
- 206. Around the time that Mr. Forkner and Mr. Gustavsson discussed MCAS's expanded operational scope, Mr. Forkner asked a Boeing executive assigned to the 737 MAX program about MCAS's operational scope. The executive confirmed to Mr. Forkner that MCAS could activate beyond the limited operational scope of a high-speed, wind-up turn. The executive suggested that Mr. Forkner contact certain subject-matter experts at Boeing for more specific information about MCAS's operational scope. DPA-A ¶ 37.
- 207. On or about November 17, 2016, the FAA AEG emailed three Boeing employees, including Mr. Forkner, Mr. Gustavsson, and another Boeing employee, a draft of the forthcoming 737 MAX FSB Report. That same day, Mr. Forkner asked Mr. Gustavsson and the other Boeing employee to review the draft 737 MAX FSB Report "for any glaring issues." DPA-A ¶ 38.
- 208. On or about November 22, 2016, the other Boeing employee emailed the draft 737 MAX FSB Report back to the FAA AEG with proposed edits. Mr. Forkner and Mr. Gustavsson were included on this email. Mr. Forkner included a proposed edit to delete a reference to MCAS, and wrote, "We agreed not to reference MCAS since it's outside

normal operating envelope." Boeing, including Mr. Forkner and Mr. Gustavsson, did not share the fact of MCAS's expanded operational scope with the FAA AEG or otherwise corrected the FAA AEG's misimpression that MCAS's operational scope was limited to high-speed, wind-up turns. DPA-A ¶ 39.

- 209. In doing so, Boeing, including Mr. Forkner and Mr. Gustavsson, knowing or unknowingly deceived the FAA AEG into believing that the basis upon which the FAA AEG had initially "agreed" to remove any information about MCAS from the 737 MAX FSB Report—that MCAS could only activate during the limited operational scope of a high-speed, wind-up turn—remained the same. Boeing, including Mr. Forkner and Mr. Gustavsson, withheld their knowledge of MCAS from the FAA AEG to avoid risking the FAA AEG taking any action that could threaten the differences-training determination for the 737 MAX. DPA-A ¶ 40.
- 210. On or about January 17, 2017, Mr. Forkner again reminded the FAA AEG in an email to delete any reference to MCAS from the forthcoming 737 MAX FSB Report, and wrote, "Flight Controls: Delete MCAS, recall we decided we weren't going to cover it [. . .] since it's way outside the normal operating envelope." Again, Boeing, including Mr. Forkner knowing or unknowingly deceived the FAA AEG into believing that the basis upon which the FAA AEG had initially "decided" to remove any information about MCAS from the 737 MAX FSB Report—that MCAS could only activate during the limited operational scope of a high-speed, wind-up turn—remained the same. DPA-A ¶ 41.
- 211. By concealing MCAS's expanded operational scope from the FAA AEG, Boeing, through Mr. Forkner and Mr. Gustavsson, defrauded, impaired, obstructed,

defeated, and interfered with the FAA AEG's lawful function to evaluate MCAS and to include information about MCAS in the 737 MAX FSB Report. DPA-A ¶ 42.

- 212. Based on Boeing's misleading statements, half-truths, and omissions to the FAA AEG about MCAS, and in reliance on those statements and omissions, the FAA AEG agreed to delete all information about MCAS from the 737 MAX FSB Report. DPA-A ¶ 43.
- 213. From in or around January 2017 through in or around July 2017 (when the 737 MAX FSB Report was published), Mr. Forkner and Mr. Gustavsson on behalf of Boeing's "business units," including the sales team, sent and caused to be sent emails to representatives of various Boeing airline customers that had agreed to purchase the 737 MAX, including major U.S.-based airlines. In these emails, Mr. Forkner and Mr. Gustavsson or members of their 737 MAX Flight Technical Team referenced and included drafts of the forthcoming 737 MAX FSB Report and airplane manuals and pilot-training materials for Boeing's 737 MAX airline customers. None of these items contained any information about MCAS, consistent with Mr. Forkner's and Mr. Gustavsson's efforts to deceive the FAA AEG into deleting information about MCAS. DPA-A ¶ 44.
- 214. On or about July 5, 2017, the FAA AEG published the first 737 MAX FSB Report, which included the FAA AEG's "Level B" differences-training determination for the 737 MAX. DPA-A ¶ 45.
- 215. Because of Boeing's intentional withholding of information from the FAA AEG, the final version of the 737 MAX FSB Report lacked information about MCAS, and relevant portions of this 737 MAX FSB Report were materially false, inaccurate, and incomplete. In turn, airplane manuals and pilot-training materials lacked information about

MCAS, and relevant portions of these manuals and materials were similarly materially false, inaccurate, and incomplete as a result. DPA-A ¶ 46.

- 216. After the FAA AEG published the final version of the 737 MAX FSB Report, Boeing continued to sell, and Boeing's customers were permitted to fly, the 737 MAX. Pilots flying the 737 MAX for Boeing's airline customers were not provided any information about MCAS in their airplane manuals and pilot-training materials. DPA-A ¶ 47.
- 217. Boeing recognized the difficulty of convincing the FAA to allow it to deceive pilots about MCAS. Indeed, a responsible Boeing official is reported to have remarked in an internal email that it would take a "Jedi mind trick" to convince the FAA to go along with this scheme. Later, the same official admitted that he had "basically lied to the regulators (unknowingly)" regarding MCAS.⁷⁰ The same official reported to the FAA that Boeing had decided to "delete MCAS" from the Flight Crew Operating Manual,⁷¹ and the FAA apparently did not object.
- 218. There is evidence that Boeing's decision to intentionally omit any disclosures about MCAS to purchasers or pilots was controversial within Boeing. On information and belief, Boeing initially included descriptions of MCAS in drafts of material

part-in-boeing-737-max-crashes-but-agency-is-pushing-to-become-more-industry-friendly/2019/10/27/bc0bf184-f4e1-11e9-ad8b-85e2aa00b5ce story.html.

⁷⁰ See Jack Nicas, Natalie Kitroeff, David Gelles, and James Glanz, "Boeing Built Deadly Assumptions Into 737 Max, Blind to a Late Design Change" New York Times June 1, 2019, https://www.nytimes.com/2019/06/01/business/boeing-737-max-crash.html.

⁷¹ See Michael Laris, Ian Duncan and Lori Aratini, "FAA's lax oversight played part in Boeing 737 Max crashes, but agency is pushing to become more industry-friendly" Washington Post, October 28, 2019, https://www.washingtonpost.com/local/trafficandcommuting/faas-lax-oversight-played-

that would be supplied to purchasers and pilots. Later, however, Boeing appears to have carefully scrubbed all mention of MCAS from these documents with one limited exception – descriptions of how to test and repair MCAS were apparently buried deep in MAX maintenance manuals so that mechanics could fix it when it malfunctioned.

- 219. There is evidence that Boeing initially included information about MCAS in the 737 MAX Flight Crew Operating Manual, 72 but removed it in a later draft. 73
- 220. As required by contract, Boeing supplied Timaero with a Detail Specification, representing that the 100-plus page Detail Specification constituted a detailed and accurate technical description of the Aircraft and its systems. However, the Detail Specifications failed to mention the existence of MCAS. Boeing's standard Detail Specification was also scrubbed; early versions of it apparently listed MCAS in the table of acronyms but did not use the term anywhere else. The versions of the Detail Specification provided to Timaero did not even mention MCAS in the acronym list.

M. Boeing's Fraud and Malfeasance is Supported by a Plethora of Internal Communications

221. Boeing released over a hundred pages of internal communications between Boeing employees to federal investigators. These communications show that key Boeing employees raised significant concerns about the overall safety of the 737 MAX, and that simulator training would be needed for pilots to fly the 737 MAX. However, Boeing

⁷² See Michael Laris, Ian Duncan and Lori Aratini, "FAA's lax oversight played part in Boeing 737 Max crashes, but agency is pushing to become more industry-friendly" Washington Post, October 28, 2019, https://www.washingtonpost.com/local/trafficandcommuting/faas-lax-oversight-played-part-in-boeing-737-max-crashes-but-agency-is-pushing-to-become-more-industry-

friendly/2019/10/27/bc0bf184-f4e1-11e9-ad8b-85e2aa00b5ce_story.html.

⁷³ *Id*.

intentionally concealed the problems from the FAA and its customers, including Timaero. Boeing employees even mocked federal rules, bragged about deceiving FAA regulators, and ridiculed the 737 MAX's safety.

The Boeing communications discussed above and herein show that Boeing 222. hid the fact that the 737 MAX had software problems and Boeing's skilled test pilots crashed the 737 MAX multiple times in the simulator. On May 5, 2015, a Boeing test pilot wrote, "I crashed big time my first few times, that's what scares me about showing any of this to [the FAA]." Exhibit 5 at 51. Boeing then hid those results from the FAA and its customers. In reference to interactions with the FAA, one Boeing employee wrote on May 15, 2018, "I still haven't been forgiven by God for the covering up I did last year" (id. at 68), while on March 22, 2018 an employee wrote, "[t] hey do not understand the liability we as a company are taking on . . . Not sure if I will be returning in April given this – am not lying to the FAA[.] Will leave that to people who have no integrity." *Id.* at 75. Multiple other communications between Boeing employees produced by Boeing as part of the U.S. government's investigation into the 737 MAX evidence instances in which Boeing concealed 737 MAX problems from the FAA during the aircraft's certification, including communications sent on July 7, 2016; January 5, 2016; August 25, 2015; May 29, 2015; April 12, 2016; May 15, 2018; and April 8, 2018. See id. at 42, 48, 50-54, 97, 98, respectively.

223. Boeing knew its design of the 737 MAX was not safe. On February 8, 2018, a Boeing employee asked, "Would you put your family on a MAX simulator trained aircraft?" *Id.* at 103. The Boeing colleague responded, "No." *Id.* at 103. One Boeing

employee further questioned the design of the aircraft on April 26, 2017, stating, "This airplane is designed by clowns, who are in turn supervised by monkeys." *Id.* at 84.

- 224. Boeing was afraid that if FAA test pilots or customer pilots got in the simulator, they would likely crash (as Boeing's skilled test pilots already had), thus exposing the 737 MAX's problems. The 737 MAX program would then be a failure. On March 28, 2017, Boeing's Chief Technical Pilot, Mark Forkner, wrote to another Boeing employee, "I want to stress the importance of holding firm there will not be any type of simulator training required to transition from NG to MAX. Boeing will not allow that to happen. We'll go face to face with any regulator who tries to make that a requirement." *Id.* at 28. On November 22, 2015, Mark Forkner also wrote, "Failure to obtain Level B training for RCAS is a planet-killer for the MAX." *Id.* at 90.
- 225. Boeing purposely misled the FAA with "Jedi-mind tricks" and pressured the FAA so they would not require simulator training. *See, e.g., id.* at 11, 19, 23, 32, 56, 81. On January 5, 2016, a two Boeing employees wrote about pressuring the FAA, "I think we make our money at this meeting by getting them to buy into the training...I think with all the inexperience present, we should be able to gang up on them and steer [sic] it the direction we want." *Id.* at 48. On July 7, 2016, a Boeing employee also wrote about pressuring the FAA, "I'm not too worried about her. She knows damn well that if her and her alone makes this call that this stupid NNC requires sim training that she'll get crucified." *Id.* at 42.
- 226. Multiple Boeing communications also evidence Boeing purposely deceiving the FAA during the 737 MAX certification process. On February 20, 2017, a Boeing employee wrote in regard to the FAA's review of Boeing's simulator testing, "Amazing what a brown envelope can achieve...The FAA were neither thorough nor

demanding...And the lies, the damned lies – I was removed from the simulator for three days in the week leading up to the evaluation on the instructions of a Senior Manager so that certainly (sic) individuals could 'tune' with the pilot. The tuning then fouled up multiple QTG tests and was clearly wrong and the pilot was forced to sign a SoC that was clearly based on a lie. Another Senior Manager was also screamed at in a temper tantrum by said individual and also barred from the simulator." *Id.* at 109.

- 227. On August 18, 2016, a Boeing marketing employee celebrated the news that the FAA would not require additional simulator training for 737 NG pilots, "This is a big part of the operating cost structure in our product marketing decks, and is at the heart of [redacted] \$\$\$ analyses. Again, NICE JOB!!" *Id.* at 11.
- 228. Boeing's communications also show that Boeing purposely deceived customers to "save [Boeing] a sick amount of \$\$\$\$" and would "make them feel stupid about trying to require any additional training requirements." *Id.* at 88 (December 12, 2017 Boeing employee communication). Boeing even dismissed Lion Air's request for simulation training prior to Lion Air's crash. On June 5, 2017, a Boeing employee wrote, "Now friggin [Lion Air] might need a sim to fly the MAX, and maybe of their own stupidity. I'm scrambling trying to figure out how to unscrew this now!" *Id.* at 78. Indeed, when Lion Air—one of the first MAX operators—sought to require simulator training for pilots transitioning to the 737 MAX, a Boeing employee encouraged the airline to drop this requirement. Instead, Boeing suggested that Lion Air adopt "less effective alternatives such as requiring flight time in previous models of the 737, or ensuring that a pilot's first MAX

flight was alongside a pilot with MAX experience.⁷⁴ The same Boeing official also stated that "there is absolutely no reason to require your pilots to require a MAX simulator to begin flying the 737 MAX. Once the engines are started, there is only one difference between NG and MAX procedurally, and that is that there is no OFF position of the gear handle. Boeing does not understand what is to be gained by a three-hour simulator session, when the procedures are essentially the same."⁷⁵ These representations were false or misleading at the time they were made. Boeing was highly motivated to convince Lion Air to forego simulator training given that Lion Air's MAX training decisions would likely influence those of other MAX operators.⁷⁶

229. Documents also show the intense pressure exerted by Boeing to prevent simulator training for pilots in keeping with its money-driven goals. In March 2017, Boeing's 737 Chief Technical Pilot wrote "I want to stress the importance of holding firm that there will not be any type of simulator training required to transition from NG to MAX. Boeing will not allow that to happen. We'll go face to face with any regulator who tries to make that a requirement." It was not until January 2020, after the deaths of 346 people in 737 MAX crashes, that Boeing finally dropped its year-long insistence that 737 pilots do

⁷⁴ Sean Broderick, "Boeing Fought Lion Air On Proposed MAX Simulator Training Requirement" Reuters, Jan. 10, 2020, https://aviationweek.com/air-transport/boeing-fought-lion-air-proposed-max-simulator-training-requirement.

⁷⁵ Sean Broderick, "Boeing Fought Lion Air On Proposed MAX Simulator Training Requirement" Reuters, Jan. 10, 2020, https://aviationweek.com/air-transport/boeing-fought-lion-air-proposed-max-simulator-training-requirement.

⁷⁶ *Id*.

⁷⁷ Jamie Freed and Tracy Rucinski, "Factbox: In Boeing internal messages, employees distrust the 737 MAX and mock regulators," Reuters, Jan. 9, 2020, https://www.reuters.com/article/us-boeing-737max-factbox/factbox-in-boeing-internal-messages-employees-distrust-the-737-max-and-mock-regulators-idUSKBN1Z90NP.

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not need simulator training to transition to the 737 MAX, and sent a letter to all MAX operators stating that it now agreed that MAX-specific simulator training should be required.⁷⁸

230. As described herein, Boeing's test pilots' concerns about the 737 MAX were completely accurate; evidenced by the unfortunate and preventable fatalities resulting from the sale and operation of the 737 MAX. The communications show that Boeing senior management did not want to hear about issues, including the simulator issues, and refused to accept delays bringing the aircraft to market. For example, on April 8, 2018, communications between Boeing employees regarding simulator testing identified that the 737 "pitched [] into a stall" and "[did not] see how this will get fixed next week," but one Boeing employee stated, "But hey, [Boeing's] 'other' pilots can probably sign this off as no training effect." Id. at 98. Communications between Boeing employees on May 18, 2018 further state, "The sim group has created a culture of 'good enough' And that is an incredibly low bar...It can't be how we do things at Boeing anymore...I have used the words 'misleading' and 'mischaracterization' a lot over the last two years in relation to [t]his program. I could be even more honest [and] use other synonyms that even better describe what has been going on." *Id.* at 64-65. A Boeing employee wrote on February 8, 2018, "I don't know how to refer to the very, very few of us on the program who are interested only in truth [b]ut it's mostly depressing that it's so few...I'm sure you, me, and [redacted] will all be sacked if we keep our position. I'm not kidding – if I could go back a

⁷⁸ Natalie Kitroeff and David Gelles, "Boeing Will Recommend 737 Max Flight Simulator Training for Pilots," New York Times, Jan. 7, 2020, https://www.nytimes.com/2020/01/07/business/boeing-737-max-simulator-training.html.

year, I would vote 'no go'..." (*id.* at 103), while on March 28, 2018, a Boeing employee wrote, "I'm fed up with...the state of the simulator or the problems that will arise..." *Id.* at 100. On April 24, 2018, a Boeing employee wrote, "The schedule simply did not permit for any corrective actions to be taken; particularly given the circumstances of the program and for a device which is clearly undermaintained. No engineering support was ever planned...despite my objections when my initial proposals were refused for being 'overly conservative." *Id.* at 105. Further on April 24, 2019, a Boeing employee wrote, "I let it slide for the Miami qualification and put my name to something I didn't have the opportunity to check thoroughly due to time constraints." *Id.* at 106.

- 231. Boeing knew there was a serious risk of the 737 MAX crashing as a result of management's coordinated directives to sell the aircraft with false representations about training and to obtain an unwarranted certification matching that falsehood. The Boeing employees involved hid that fact from the FAA and its customers, including Timaero, with not only the blessing but the demand of management.
- 232. Ultimately, Boeing misled the FAA into approving just one hour of pilot training on an iPad about the differences between the 737 MAX and the previous 737 model. Boeing also knowingly misrepresented to customers, including Timaero, that no additional simulator training would be required for pilots already certified to fly its predecessor 737 NG. MCAS, however, was not even mentioned in the one-hour training and was also removed from the flight crew operations manual.
- 233. Furthermore, despite knowing MCAS posed an ongoing airplane safety issue, particularly after the Lion Air Crash in October 2018, Boeing nevertheless issued public statements assuring that the 737 MAX airplane was "as safe as any airplane that has

ever flown the skies." Boeing has agreed to pay \$200 million to settle related civil charges brought by the U.S. Securities and Exchange Commission for defrauding the public with such statements.⁷⁹

234. Therefore, Boeing knew that the 737 MAX was likely to crash and hid that fact from customers, customer pilots, airlines, and regulators who were left to learn the risks themselves.

N. Meanwhile, Timaero and Boeing Execute Six Additional Supplemental Agreements Between 2017-2018, and Boeing Delivers Two 737 MAX Aircraft to Timaero in December 2018

- 235. On August 28, 2017, Timaero and Boeing entered Supplemental Agreement No. 2. Supplemental Agreement No. 2 provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect."
- 236. On November 12, 2017, Timaero and Boeing entered Supplemental Agreement No. 3. Supplemental Agreement No. 3 provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect."
- 237. On February 26, 2018, Timaero and Boeing entered Supplemental Agreement No. 4. Supplemental Agreement No. 4 provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect."

⁷⁹ Boeing to Pay \$200 Million to Settle SEC Charges that it Misled Investors about the 737 MAX, dated September 22, 2022, https://www.sec.gov/news/press-release/2022-170.

- 238. On September 21, 2018, Timaero and Boeing entered Supplemental Agreement No. 5. Supplemental Agreement No. 5 provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect."
- 239. On September 28, 2018, Timaero and Boeing entered Supplemental Agreement No. 6. Supplemental Agreement No. 6 provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect."
- 240. On November 29, 2018, Timaero and Boeing entered Supplemental Agreement No. 7. Supplemental Agreement No. 7 provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect."
- 241. At all times, Timaero has acted in accordance with its contractual obligations under the Purchase Agreement.
- 242. Timaero has made all advanced payments in accordance with its contractual schedule. Timaero paid for and accepted two (2) 737 MAX aircraft provided by Boeing under the Purchase Agreement in December 2018.
- 243. Pursuant to this acceptance, Timaero signed a form Acceptance of Delivery—drafted by Boeing—without knowledge of the 737 MAX's problems, or the ability to discover on its own what Boeing had failed to disclose.
- 244. Boeing's delivery of 737 MAX aircraft to Timaero constitutes a further representation regarding Level B non-simulator training and Boeing's purported compliance with all applicable regulations and the airworthiness of the aircraft.

- 245. Timaero accepted delivery of the first Model 737 MAX 8 (Serial Number 60458, Registration Number HL8340) on December 19, 2018. As part of the delivery, Timaero representatives, including Barry Grimm and/or Alexey Rastashchenov, and other individuals took part in a Customer Acceptance Flight (C1 Flight).
- 246. Starting on December 19, 2018, the 737 MAX 8 HL8340 was then ferried from Seattle, Washington (BFI) to Seoul, South Korea (GMP) with stops in Anchorage, Alaska (ANC) and Sapporo, Japan (CTS). Upon information and belief, at least the following persons were present on the ferry flight from BFI to GMP: Kim Bong Kwan (Pilot), Chung Jae Woong (Pilot), Jeong Jinwoo (Pilot), Lee Yuho (Pilot), Park Chanwoo (Aircraft Maintenance Mechanic), Lee Jungryo (Aircraft Dispatcher).
- 247. Timaero accepted delivery of the second Model 737 MAX 8 (Serial Number 60459, Registration Number HL8341) on December 29/30, 2018. As part of the delivery, at least Timaero representatives Barry Grimm and/or Alexey Rastashchenov, among other individuals, took part in a Customer Acceptance Flight (C1 Flight).
- 248. Starting on December 30, 2018, the 737 MAX 8 HL8341 was then ferried from Seattle, Washington (BFI) to Seoul, South Korea (GMP) with stops in Honolulu, Hawaii (HNL) and Guam, Guam (GUM). Upon information and belief, at least the following persons were present on the ferry flight from BFI to GMP: Kim Beom (Pilot), Joo Jae Do (Pilot), An Jihyun (Pilot), Park Sunhyuk (Aircraft Maintenance Mechanic), Shim Seon Hwa (Aircraft Dispatcher).
- 249. Both HL8340 and HL8341 were continuously operated by EASTAR JET out of Seoul, Korea before the 737 MAX was grounded. The above acceptance and ferry flights, as well as the EASTAR JET flights, created a substantial risk of injury or death to

those aboard the aircraft as well as those on the ground as the aircraft flew over heavily populated areas. Timaero would not have flown the 737 MAX and exposed its employees and others to harm had they known of the 737 MAX aircraft's dangerous defects.

- 250. When Boeing delivered two 737 MAX aircraft to Timaero in December 2018, it was unknown to Timaero at the time that the aircraft did not conform to the aircraft's type certificate. However, this was known to Boeing, who did not disclose this information to Timaero at any time during the execution of the Purchase Agreement, any of the Supplemental Agreements, or prior to or during delivery of two 737 MAX aircraft. Timaero accepted delivery of its aircraft in December 2018 relying on Boeing's false assurances that the 737 MAX was safe and trusting that Boeing had disclosed all material information about the design and operation of the 737 MAX to Timaero and regulators. At least the above individuals flew in the aircraft, and thus suffered a real risk of injury or death, prior to the second fatal 737 MAX crash.
- 251. As a result of Boeing's fraudulent and wrongful conduct, Timaero unwittingly purchased defective aircraft and exposed myriad people, including pilots, employees, agent representatives, and countless persons on the ground to undue risk of harm by flying its Aircraft.
- 252. Further, not only has Boeing fraudulently misrepresented or omitted material information about the airplanes, Boeing failed to deliver any further aircraft in accordance with its contractual obligations in the Purchase Agreement.
- 253. Timaero relied on each of the above statements in deciding whether to execute each of the foregoing Supplemental Agreements, each of which expressly contracted that no additional simulator training would be required for 737 NG pilots.

Timaero would not have purchased any 737 MAX aircraft, executed the Purchase Agreement, executed any of the Supplemental Agreements, or accepted delivery of any 737 MAX aircraft had Boeing disclosed the information in Boeing's possession and control identified in this complaint.

o. U.S. Pilots Reported Uncommanded, Erratic Flight Paths to the FAA

254. In 2018, pilots repeatedly voiced safety concerns about the Boeing 737 MAX 8, including problems with the autopilot system forcing the aircraft's nose down. Pilots reported: altitude deviation due to the auto-pilot system which prompted Air Traffic control to issue off-course vectors to the pilots and other aircraft in the area; the aircraft pitching downward after autopilot was engaged on departure, the pilot reporting that he could not "think of any reason the aircraft would pitch nose down so aggressively"; an autopilot issue shortly after takeoff where the nose was forced so far down that the aircraft's ground proximity warning system alerted the pilots that they were in immediate danger of flying into the ground; and a failure of the autothrottles (which command the plane to accelerate to a set speed within certain parameters) after takeoff and climb which prompted manual override. ⁸⁰ In an interview with the New York Times, Dennis Tajer, a pilot and spokesperson for the Allied Pilots Association explained, "An aircraft dipping after takeoff is not normal. It's beyond abnormal. It's unacceptable."

⁸⁰ Gordon Dickson, Pilots warned of 'nose down' Boeing 737 Max 8 problems before Ethiopia crash, FORT WORTH STAR-TELEGRAM (March 12, 2019), https://www.star-telegram.com/news/business/aviation/article227481979.html; Kathryn Wolfe, Pilots complained at least 5 times about Boeing 737 MAX problems, records show, POLITICO (March 12, 2019), https://www.politico.com/story/2019/03/12/pilots-boeing-737-1266090.

⁸¹ Mika Grondahl, Allison McCann, James Glanz, Blacki Migliozzi, and Umi Syam, In 12 Minutes, Everything Went Wrong How the pilots of Lion Air Flight 610 lost control, The New York Times (Dec. 12, 2018),

255. One captain called the flight manual excluding MCAS as "inadequate and almost criminally insufficient" and another stating that it was "unconscionable" that Boeing allowed the plane to be flown with inadequate pilot training and disclosures.⁸²

P. Crashes of Lion Air Flight 610 and Ethiopian Airlines Flight 302 and Boeing's Response

- 256. On October 29, 2018, Lion Air Flight 610, a Boeing 737 MAX, crashed shortly after takeoff into the Java Sea near Indonesia. All 189 passengers and crew on board died. DPA-A ¶ 48.
- 257. Boeing delivered the aircraft to Lion Air less than three months before the crash.
- 258. Following the Lion Air crash, the FAA AEG learned that MCAS activated during the flight and may have played a role in the crash. The FAA AEG also learned for the first time about MCAS's expanded operational scope. DPA-A ¶ 49.
- 259. On March 10, 2019, Ethiopian Airlines Flight 302, a Boeing 737 MAX, crashed shortly after takeoff near Ejere, Ethiopia. All 157 passengers and crew on board died. Following the Ethiopian Airlines crash, the FAA AEG learned that MCAS activated during the flight and may have played a role in the crash. DPA-A ¶ 53.

https://www.nytimes.com/interactive/2018/12/26/world/asia/lion-air-crash-12-minutes.html.

⁸² Cary Aspinwall, Ariana Giorgi, and Dom DiFurio, Several Boeing 737 Max 8 pilots in U.S. complained about suspected safety flaw, THE DALLAS MORNING NEWS (March 12, 2019), https://www.dallasnews.com/business/airlines/2019/03/12/several-boeing-737-max-8-pilots-in-u-s-complained-about-suspected-safety-flaw/.

- 260. On March 13, 2019, the 737 MAX was officially grounded in the United States, indefinitely halting further flights of this airplane by any U.S.-based airline. DPA-A ¶ 54.
- 261. Both the Lion Air and Ethiopian Airlines flights were a result of MCAS malfunction. In fact, Boeing knew within hours of the first crash that MCAS likely caused the crash. Boeing Commercial Airplane's Chief Engineer, John Hamilton, testified in front of Congress that, "[i]n the hours following the Lion Air accident, we convened a group of experts from around the company and . . . [w]e quickly identified that this MCAS activation could have been a scenario."83
- 262. After the crashes of Lion Air Flight 610 and Ethiopian Airlines Flight 302, all 737 MAX aircraft were grounded worldwide.

Q. Boeing's Response to the Catastrophic Failure of its 737 MAX Aircraft

263. Boeing's response to the 737 MAX crashes and subsequent grounding crisis was horrendous and despicable. Boeing first attempted to blame the pilots, the airlines, and its own subcontractors for the 737 MAX's defects and the crashes. Boeing started trying to fix MCAS shortly after the Lion Air crash, and euphemistically called it a "product improvement." Even after the Lion Air crash, Boeing tried to keep the existence of MCAS secret until the FAA forced more disclosure. After the 737 MAX was grounded following the Ethiopian crash, Boeing promised that it would fix the problem within weeks, and that customers and passengers could safely and confidently resume 737 MAX flights in short

⁸³ U.S. Congress Hearing Before the Committee on Transportation and Infrastructure House of Representatives. "The Boeing 737 Max: Examining the Design, Development, and Marketing of the Aircraft" (Date: Oct. 30, 2019) page 54; Text From: Congress.gov.

order. As the grounding dragged on, Boeing repeatedly promised a fix just around the corner, but was unable to deliver for nearly twenty months. Boeing's botched and ineffective response to the crashes and its own misconduct has made the 737 MAX's problems much worse and has substantially increased Plaintiffs' damages. Although Boeing is a long-standing and valued employer in the Puget Sound region, its design and sale of the 737 MAX and its response to the crashes and grounding crisis do not reflect Boeing's traditional values.

- 264. Boeing knew or should have known that the MCAS was responsible for the Lion Air crash, including because of the numerous pilots who reported issues of uncommanded nose-down maneuvers. Boeing warned of a possible fault in the aircraft's angle-of-attack system by updating the flight crew operations manual for the 737 MAX about a week after the Lion Air crash.
- 265. After the crash of Lion Air Flight 610, Boeing for the first time provided to airlines details about the MCAS, including the MCAS's 2.5-degree movement of the horizontal stabilizer and the fact that it can be triggered multiple times.
- 266. A November 2018 FAA analysis following the Lion Air crash projected up to 15 additional catastrophic failures over the 30–45-year lifespan of 737 MAX fleet.⁸⁴ A retired FAA and Pentagon air-safety official has stated that the projected 15 additional crashes "would be an unacceptable number in the modern aviation-safety world."⁸⁵

⁸⁴ Andy Pasztor and Andrew Tangel, Internal FAA Review Saw High Risk of 737 MAX Crashes, THE WALL STREET JOURNAL (December 11, 2019), https://www.wsj.com/articles/internal-faa-review-saw-high-risk-of-737-max-crashes-11576069202.

⁸⁵ Andy Pasztor and Andrew Tangel, Internal FAA Review Saw High Risk of 737 MAX Crashes, THE WALL STREET JOURNAL (December 11, 2019),

267. The FAA issued Emergency Airworthiness Directive ("Emergency AD") 2018-23-51 on November 7, 2018. The Emergency AD provided mandatory warnings and instructions regarding "unsafe condition[s] ... likely to exist or develop" to "owners and operators of The Boeing Company Model 737-8 and -9 airplanes."

268. The Emergency AD "was prompted by analysis performed by the manufacturer showing that if an erroneously high single angle of attack (AOA) sensor input is received by the flight control system, there is a potential for repeated nose-down trim commands of the horizontal stabilizer." The Emergency AD "address[ed] this potential . . . nose-down trim, which could cause the flight crew to have difficulty controlling the airplane, and lead to excessive nose-down altitude, significant altitude loss, and possible impact with terrain."

269. The Emergency AD further revised instructions to flight crews in the operating procedures of the flight manual "in the event an uncommanded nose down stabilizer trim is experienced on the 737-8/-9." The Emergency AD instructed the flight crew to follow the "Runaway Stabilizer procedure," which states to "[d]isengage autopilot and control airplane pitch attitude with control column and main electric trim as required. If relaxing the column causes the trim to move, set stabilizer trim switches to CUTOUT. If runaway continues, hold the stabilizer trim wheel against rotation and trim the airplane manually." The Emergency AD failed to provide a detailed description of the MCAS.

270. Boeing's solution of treating an MCAS malfunction as a runaway stabilizer has been challenged by pilots and aviation experts. First, in contrast to a runaway stabilizer's

https://www.wsj.com/articles/internal-faa-review-saw-high-risk-of-737-max-crashes-11576069202.

continuous movement, an MCAS failure causes an uncommanded movement that, even if counteracted by a pilot, is triggered by MCAS again. Second, the MCAS disables the ability of a pilot to cut electric power to a stabilizer, which can interrupt any stabilizer movement.

- 271. Boeing intentionally downplayed MCAS's significant problems and failed to take adequate preventative measures. Boeing also failed to inform the public and customers, such as Timaero, of the danger MCAS presented. Boeing further failed to adequately disclose the significant differences between the 737 MAX and its predecessors.
- 272. Even following the two crashes, Boeing continued to fail to take appropriate action as it was concerned with the economic impact to its business. Boeing was concerned airlines would ground aircraft, cancel orders, or purchase new aircraft from its rival Airbus. Boeing deliberately downplayed the unsafe nature of its defective aircraft, and falsely lured the public into believing the 737 MAX was airworthy and safe to induce customers, including Timaero, to purchase and accept delivery of 737 MAX aircraft.
- 273. The world grounded the Boeing 737 MAX following the Ethiopian Airlines crash. China was the first country to do so on March 11, 2019. Dozens of countries followed. On March 13, 2019, the FAA issued a temporary ban on the 737 MAX. The FAA's Emergency Order of Prohibition states:

"Under 49 U.S.C. 46105(c), the Acting Administrator has determined that an emergency exists related to safety in air commerce. On March 13, 2019, the investigation of the ET302 crash developed new information from the wreckage concerning the aircraft's Start Printed Page 9706 configuration just after takeoff that, taken together with newly refined data from satellite-based tracking of the aircraft's flight path, indicates some similarities between the ET302 and JT610 accidents that warrant further investigation of the possibility of a shared cause for the two incidents that needs to be better understood and addressed. Accordingly,

the Acting Administrator is ordering all Boeing 737 MAX airplanes to be grounded pending further investigation."86

- 274. Therefore, Boeing was forced to ground all 737 MAX aircraft after the Ethiopian Airlines crash investigation revealed similarities with the Lion Air crash.
- 275. On December 16, 2019, Boeing announced that it is suspending production of the 737 MAX starting in January 2020.⁸⁷ That same day, Stanley A. Deal, President & CEO of Boeing Commercial Airplanes, wrote to Timaero to inform it of Boeing's decision to suspend production and delivery of Timaero's aircraft until a time uncertain.
- 276. The 737 MAX aircraft contracted for between Boeing and Timaero are now either worthless, commercially damaged beyond repair according to the terms of the Purchase Agreement, or seriously diminished in value. Timaero therefore has been harmed and continues to be harmed by Boeing's wrongful actions.

R. Investigations Related to the 737 MAX

- 277. Many investigations have been opened into Boeing's fraud and certification failures.
- 278. As shown above, Boeing admitted to criminally defrauding the FAA in certifying the 737 MAX following an investigation by the United States Department of Justice.

⁸⁶ Notification of Emergency Order of Prohibition, 84 Fed. Reg. 9705-06 (March 13, 2019), https://www.federalregister.gov/documents/2019/03/18/2019-05067/operators-of-boeing-company-model-737-8-and-boeing-company-model-737-9-airplanes-emergency-order-of (emphasis added).

⁸⁷ See https://boeing.mediaroom.com/2019-12-16-Boeing-Statement-Regarding-737-MAX-Production.

279. Other investigations and resulting reports include the United States House of Representatives and Senate, the Department of Transportation, the Securities and Exchange Commission, foreign and international organizations.⁸⁸ Boeing's acts and omissions are also the subject of private litigation from crash victims' families, Boeing shareholders, Boeing customers, and airline pilots.⁸⁹

280. In September 2020, the House Committee on Transportation and Infrastructure issued its report entitled "The Design, Development, and Certification of the Boeing 737 MAX." The extensive report identifies a "disturbing pattern of technical miscalculations and troubling management misjudgments" by Boeing arising out of five thematic areas across the 737 MAX's development: (1) production pressure to compete with Airbus; (2) faulty design and performance assumptions; (3) a "culture of concealment" at Boeing; (4) the failure of Boeing employees designated as FAA "authorized representatives" to disclose MCAS concerns to the FAA; and (5) Boeing's ability to obtain favorable decisions from FAA management over the objections of the FAA's own technical experts. The Committee concluded Boeing "gambled with the public's safety" between crashes as it concealed the true nature of its flawed design from the flying public while hundreds of MAXs were in service. 90

⁸⁸ For example, on March 9, 2020, the Federal Democratic Republic of Ethiopia Ministry of Transport published its Aircraft Accident Investigation Bureau Interim Investigation Report on Ethiopian Airlines Flight 302. Exhibit 8 hereto.

⁸⁹ Sinead Baker, "Here are all the investigations and lawsuits that Boeing and the FAA are facing after the 737 Max crashes killed almost 350 people," Business Insider, June 24, 2019, https://www.businessinsider.com/boeing-737-max-crisis-list-lawsuits-investigations-faces-faa-2019-5.

⁹⁰ The House Committee on Transportation & Infrastructure, Final Committee Report, The Design, Development & Certification of the Boeing 737 MAX, dated Sept. 2020,

- 281. Among the "several unmistakable facts" uncovered (*id.* at 6) the House T&I Committee discovered are that:
 - a. "Boeing withheld crucial information from the FAA, [and] its customers
 ..." including "concealing the very existence of MCAS from 737 MAX
 pilots."91
 - b. "In November 2012, for instance, it took a Boeing test pilot more than 10 seconds to respond to uncommanded MCAS activation during a flight simulator test, a condition the pilot found to be 'catastrophic[.]'... This event should have focused Boeing's attention on the need for enhanced pilot training for MAX pilots. It didn't." Rather, despite Boeing's "keen awareness of the importance of this information" and the "potentially 'catastrophic' consequences" that could result if it took a pilot 10 seconds to respond to uncommanded MCAS activation," there is "no evidence that Boeing shared this information with the FAA, [or] its customers...."
 - c. "One of Boeing's key goals for the 737 MAX program was that simulator-based training would not be required for pilots transitioning to the 737 MAX from the 737 NG. That goal undermined appropriate pilot training requirements, hampered the development of safety features that

 $https://transportation.house.gov/imo/media/doc/2020.09.15\%20FINAL\%20737\%20MAX\ \%20Report\%20for\%20Public\%20Release.pdf.$

⁹¹ *Id.* at 13.

⁹² *Id.* at 25.

- conflicted with that goal and created management incentives to downplay the risks of technologies that jeopardized that goal."93
- d. In March 2016, "Boeing sought, and the FAA approved, the removal of references to MCAS from Boeing's Flight Crew Operations Manual (FCOM) As a result, 737 MAX pilots were precluded from knowing of the existence of MCAS and its potential effect on aircraft handling without pilot command."94
- 282. Despite the intense scrutiny and the important public interest questions raised about the development and airworthiness of the 737 MAX, many of the facts of the 737 MAX's development have been kept in Boeing's or investigators' hands and away from the public and from Timaero. But the documents that have been publicly released show that Boeing knowingly concealed from customers and pilots the existence of MCAS and other differences between the 737 NG and the 737 MAX. They also display Boeing's push to avoid simulator or other extensive training due to marketing and economic pressures. Timaero reasonably believes that future disclosures, and discovery, will further confirm Boeing's wrongful conduct.

S. Timaero Based its Decision to Purchase the 737 MAX Aircraft on Boeing's Representations

283. Timaero based its decision to purchase 737 MAX aircraft on the representations made by Boeing that the aircraft would be certified by the FAA, be airworthy, and would not require additional simulator training for pilots already certified

⁹³ *Id*.

⁹⁴ *Id.* at 20.

to fly its predecessor 737 NG. However, due to Boeing's fraudulent conduct, Timaero was unable to make informed purchasing decisions, Timaero paid for and took delivery and subsequently resold unsafe aircraft, and lost business from undelivered aircraft that Boeing was required to deliver under the Purchase Agreement.

284. Pursuant to the Purchase Agreement, Timaero notified Boeing on February 28, 2019 that it planned to sell two 737 MAX aircraft scheduled to be delivered in May 2019 and July 2019 to AFG Aviation, who would lease the aircraft to NordStar Airlines. Boeing began customizing the aircraft specifically to NordStar's requirements and specifications. However, three days after the Ethiopian Airlines crash on March 13, 2019, Timaero notified Boeing that "[u]nder the circumstances, Nordstar has put the entire discussion on hold." Timaero also notified Boeing that "[a]ll our other potential clients have put their discussions with us on hold as well pending further developments."

285. As part of the March 13 notification, Timaero informed Boeing that NordStar was in "continuous contact with Boeing" and stressed that "we need to be in a continuous dialogue and it's important that Boeing keeps us advised of all the developments throughout" for AFG Aviation to purchase and NordStar to lease the 737 MAX aircraft. However, Boeing has failed to keep Timaero, AFG Aviation, and NordStar up to date. Timaero has not been able to sell or lease any 737 MAX aircraft since the 2019 worldwide grounding.

V. CAUSES OF ACTION

Count I - Fraud

286. Timaero realleges the allegations of all prior paragraphs as if each is fully set forth herein.

287. Boeing is the manufacturer, designer, distributor, seller and/or supplier of the 737 MAX model aircraft. Under the directive of senior management, Boeing and/or employees working in the scope of their employment made knowingly false statements and/or omissions about material facts to Timaero to influence Timaero's decision to purchase the 737 MAX, execute the Purchase Agreement, execute the Supplemental Agreements (each of which provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect,"), and to accept delivery of two 737 MAX aircraft.

amended type certificate requiring only Level B differences training because of the aerodynamic problems created by placing larger, more fuel-efficient engines on the existing 737 NG frame. Boeing chose not to make the necessary structural changes to the aircraft's frame because that would affect the aircraft's ability to be certified under an amended type certification. Instead, Boeing utilized a flight control system (MCAS) to stabilize the aircraft and hid MCAS's full functionality from the FAA and Timaero because Boeing knew MCAS would jeopardize Level B non-simulator training. Boeing's plan enabled it to obtain FAA certification with Level B non-simulator training, and to market the 737 MAX as only needing computer-based training for 737 NG pilots. However, Boeing knew those statements were false. Further, the FAA repeatedly communicated to Boeing that adding MCAS (among other features) would result in additional simulator training.

- 289. As detailed above, however, as part of Boeing's authorized sales communications to induce customers to buy 737 MAX aircraft, Boeing represented to Timaero in multiple meetings, marketing materials, business proposals, press releases, and publicly that the 737 MAX would not require additional simulator training for pilots already certified to fly its predecessor 737 NG (Level B non-simulator pilot training requirements), and would be airworthy, safe, free from design defects, and in compliance with appropriate aviation regulations. Boeing and Timaero expressly contracted in the Purchase Agreement that no additional simulator training would be required for 737 NG pilots.
- 290. Boeing's representations were false, misleading, and/or in reckless or negligent disregard of the truth. Boeing also concealed all or parts of the truth of material facts, including the 737 MAX's aerodynamic instability and the MCAS flight control system, when it had a legal duty to speak, and when it had already made representations to Timaero and the FAA.
- development and testing, MCAS, the design changes of the 737 MAX that required the use of MCAS, and the risks that these modifications posed, Timaero would not have purchased 737 MAX aircraft from Boeing, would not have entered into the Supplemental Agreements, and would not have accepted delivery of its Aircraft. But, in conjunction with the execution of the Purchase Agreement and each of the Supplemental Agreements, Timaero relied on Boeing's assurances that the 737 MAX was an improved version of the 737 that would not require additional training or depart significantly from the operation and flight characteristics of the 737 NG or previous generations of the 737, and that the 737 MAX would continue to have the best safety record of any aircraft.

- 292. As a result of Boeing's inducement of Timaero to buy MAX aircraft through the Purchase Agreement and each of the Supplemental Agreements, and Boeing's other wrongful conduct, the 737 MAX aircraft that Timaero agreed to purchase have lost substantial value, if not all of their value, and/or are commercially damaged beyond repair according to the terms of the Purchase Agreement. Timaero has thus incurred significant damages in the form of diminution of value, as well as additional damages in the form of additional expense, costs of temporary cover, and other items.
- 293. Even when or if Boeing is able to completely fix the aircraft so that they can fly, Timaero's ability to use the aircraft will be substantially diminished due to continuing and legitimate safety fears concerning the 737 MAX resulting from Boeing's misconduct.
- 294. Boeing did not disclose any of the 737 MAX design and development problems to purchasers, including Timaero, because it did not want to jeopardize sales, including Boeing's sale of the aircraft to Timaero.
- 295. Boeing knew that the 737 MAX had materially different flight characteristics from the 737 NG, requiring Boeing to include MCAS in the 737 MAX.
- 296. Boeing did not disclose MCAS or the reasons why it was necessary in the 737 MAX to Timaero. Boeing had a duty to disclose MCAS to customers, including Timaero, the FAA, and pilots. Failure to disclose MCAS and train pilots on MCAS resulted in two fatal crashes.
- 297. Boeing did not disclose to Timaero that MCAS could engage in a way that would cause the 737 MAX to enter into a dive based on a fault or malfunction in only one of the aircraft's two AOA sensors.

- 298. As detailed above, Boeing continued to make the same knowingly false representations and omissions to Timaero before, during, and after signing the Purchase Agreement and before, during, and after execution of each of the Supplemental Agreements.
- 299. Also as detailed above, when Boeing promised before, during, and after execution of the Purchase Agreement and the Supplemental Agreements that the 737 MAX would not require simulator training, Boeing knew its misrepresentations were false and had no intention of fulfilling its promise.
- 300. As a result of management's coordinated directives to sell the aircraft with false representations about training, Boeing set out to obtain an unwarranted certification matching that falsehood. After testing and test flights identified major flight problems, and after Boeing incompletely and disingenuously disclosed its initial MCAS design to the FAA, Boeing totally redesigned MCAS to address long-known flight stability problems. Boeing expanded and materially changed MCAS's functional abilities. Boeing knew it could not disclose its MCAS changes to the FAA because it would put its goal of no additional simulator training at even greater risk. As a result, Boeing purposely misrepresented the functional abilities of MCAS to the FAA, mischaracterized MCAS's failure condition, and omitted the MCAS redesign from the FAA. In the limited amount of information related to MCAS Boeing did disclose to the FAA, Boeing purposely mischaracterized the system and purposely gave only small amounts of information to different disconnected FAA employees so that the FAA could not piece the information together.
- 301. Further, Boeing knew there was a serious risk of the 737 MAX crashing and knew that MCAS was dangerous. Boeing's documents show it concealed the 737 MAX's

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software problems from the FAA, and a skilled Boeing test pilot reported on May 5, 2015 crashing the 737 MAX multiple times in the simulator. Boeing knew that its test pilots' crashed simulator results put the entire program at risk from being approved, and therefore, purposely omitted those results from the FAA and Timaero. Boeing concealed the fact that the 737 MAX was likely to crash from Timaero, who was left to learn the risks itself.

- 302. Boeing made these representations and omissions knowing that Timaero was relying on their truth. It made them deliberately for its own economic advantage.
- 303. Boeing had a legal duty to correct its misrepresentations once made to the FAA and Timaero, and disclose its omissions to the FAA and Timaero, but failed to do so. Timaero relied on Boeing's misrepresentations and omissions as true at least because of Boeing's superior knowledge concerning the 737 MAX. Timaero has to rely on Boeing properly obtaining FAA certification because Timaero has no way to check Boeing's compliance with FAA requirements. Boeing purposely misled the FAA and Timaero and purposely omitted material information from the FAA to obtain certification, and from Timaero, as detailed above. Boeing's representations of airworthiness and only computerbased training for certified 737 NG pilots, combined with the circumstances of a long-term contractual relationship during certification, involving the initial Purchase Agreement and seven Supplemental Agreements, that involved Boeing delivering the aircraft and Timaero's pre-delivery payments, imposed on Boeing a duty to tell Timaero of problems that undermined or contravened its representations, including a duty to disclose that Boeing was not conducting the FAA certification process properly and that it was defrauding the FAA.

- 304. Timaero was further aware of and relied on Boeing's representations to the FAA because Boeing received an FAA certification as required by the Purchase Agreement and Boeing communicated certification and satisfaction of the Purchase Agreement to Timaero. Boeing's representations to the FAA are inherently incorporated in Boeing's representations to Timaero that it obtained FAA certification and Boeing's delivery of aircraft that Boeing represents is validly certified.
- 305. Only Boeing, not Timaero, may submit information and evidence to the FAA to obtain certification of the 737 MAX. Timaero is dependent therefore not only on the information, and the accuracy thereof, that Boeing provides to the FAA, but also Boeing's authority to submit information as an applicant for certification.
- 306. Timaero was entitled to rely, and did rely, on Boeing's misrepresentations and omissions, as specified herein. Timaero would not have performed the following actions had it known the truth at the respective dates about Boeing's misrepresentations or that Boeing was concealing objectively material information relating to the 737 MAX from the FAA and Timaero:
 - 1. entered into the Purchase Agreement on January 10, 2014 to purchase twenty (20) 737 MAX aircraft and paid a 1% deposit of the contract price of approximately \$20 million;
 - 2. entered into the VEB-AGTA on January 10, 2014;
 - 3. paid Boeing pre-delivery payments of \$189,224,800, which included paying 4% of each aircraft's sale price at 24 months prior to delivery, and 5% of each aircraft's sale price at 21 months, 18 months, 15 months, and 12 months prior to delivery;
 - 4. entered into Supplemental Agreement No. 1 on September 15, 2016, which converted two (2) Boeing 737-800 aircraft from a prior purchase agreement into two (2) Boeing 737 MAX aircraft, and which provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect.";

- 5. entered into Supplemental Agreement No. 2 on August 28, 2017, which provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect.";
- 6. entered into Supplemental Agreement No. 3 on November 12, 2017, which provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect.";
- 7. entered into Supplemental Agreement No. 4 on February 26, 2018, which provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect.";
- 8. entered into Supplemental Agreement No. 5 on September 21, 2018, which provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect.":
- 9. entered into Supplemental Agreement No. 6 on September 28, 2018, which provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect.";
- 10. entered into Supplemental Agreement No. 7 on November 29, 2018, which provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect.";
- 11. paid for and accepted delivery of two (2) 737-MAX aircraft in December 2018; and
- 12. unwittingly omitted material facts to Timaero's customers and potential customers to sell and lease 737 MAX aircraft.
- 307. Boeing's misrepresentations and omissions were the proximate cause and cause in fact of Timaero's damages.
- 308. Notably, as stated in the DPA, Boeing conspired to defraud the FAA AEG "[f]rom at least in and around November 2016 through at least in and around December 2018." DPA-A ¶ 16. Accordingly, despite the fact that Boeing knew of material defects in the 737 MAX long before, even Boeing's admitted fraud occurred coexistent in time with

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the execution of the Supplemental Agreements and delivery of two 737 MAX aircraft to Timaero.

Further, with respect to Supplemental Agreement No. 1 entered into on 309. September 15, 2016, which converted two Boeing 737-800 aircraft from a prior purchase agreement into two Boeing 737 MAX aircraft, Boeing secretly expanded MCAS's use as explained herein 6-months prior to execution of Supplemental Agreement No. 1, on March 30, 2016, pursuant to Revision D. For the reasons stated herein, Boeing knew that the expansion of MCAS's operation on March 30, 2016 and the version of MCAS released on August 15, 2016 precluded Level B non-simulator training in all 22 of the 737 MAX aircraft that were to be delivered to Timaero. Boeing thus knew at least as early as March 30, 2016 and without question by August 15, 2016, that it could not deliver aircraft to Timaero that only required Level B non-simulator training. Nevertheless, Boeing represented as of September 15, 2016 in Supplemental Agreement No. 1 that "all other terms and conditions of the [2014] Purchase Agreement," including the promise of delivering 20 aircraft that require only Level B non-simulator training "remain unchanged and [] in full force and effect." Boeing knew that its representation was not true and that its promise to deliver 20 aircraft from the 2014 Purchase Agreement and the two aircraft from Supplemental Agreement No. 1 with only Level B non-simulator training would not be fulfilled. Boeing never intended that its promises would be fulfilled. Timaero relied on Boeing's misrepresentation that "all [] terms and conditions of the [2014] Purchase Agreement remain unchanged and are in full force and effect" in executing Supplemental Agreement No. 1. Timaero would not have entered into Supplemental Agreement No. 1, or any of the Supplement Agreements, had Boeing disclosed that it secretly expanded MCAS's use at least as early as March 2016.

- 310. Further, upon information and belief, the information that led to the decision to design and implement Revision D was known to Boeing prior to Timaero's execution of the Purchase Agreement in January 2014. Thus, upon information and belief, Boeing knew that an expansion of MCAS was required prior to Timaero's execution of the Purchase Agreement. Boeing thus knew prior to January 10, 2014 that it could not deliver aircraft to Timaero that only required Level B non-simulator training. Nevertheless, Boeing represented and promised in the Purchase Agreement that it would deliver 20 aircraft that require only Level B non-simulator training. Boeing knew that its representations and promises were not true and that its promise to deliver 20 aircraft with only Level B non-simulator training would not be fulfilled. Boeing never intended that its promises would be fulfilled. Timaero relied on Boeing's misrepresentation in executing the Purchase Agreement. Timaero would not have entered into any of the Supplemental Agreements had Boeing disclosed its knowledge that MCAS's use would need to be expanded.
- 311. As early as 2012 to early 2014, and throughout the 737 MAX certification process, Boeing knew, should have known, and/or recklessly disregarded a high likelihood that it would have to lie to regulators to approve the 737 MAX utilizing MCAS with only Level B non-simulator training, obtain airworthiness certifications, and comply with all applicable regulations.
- 312. As early as 2012 to early 2014, and throughout the 737 MAX certification process, Boeing knew, should have known, and/or recklessly disregarded a high likelihood that its statements to Timaero during this timeframe about FAA approval requiring only

Level B non-simulator training and Boeing's obtaining of airworthiness certifications and compliance with all applicable regulations were false, or misleading half-truths.

- 313. Even if Boeing thought, at one time, that its representations regarding Level B non-simulator training and its obtaining of airworthiness certifications and compliance with all applicable regulations were or were going to be true, Boeing acquired information as early as from 2012 to early 2014 and throughout the 737 MAX certification process that made its representations untrue or misleading. Boeing had a duty to correct its misrepresentations prior to Timaero's execution of the Purchase Agreement, each of the Supplemental Agreements, and delivery of 2 aircraft in December 2018.
- 314. At the time of this Third Amended Complaint, Boeing was contractually obligated in accordance with the Purchase Agreement to deliver five (5) Boeing Model 737-8 Aircraft to Timaero. Boeing, however, has only delivered two (2) 737-8 Aircraft, which, unknown to Timaero at the time, did not conform to the aircraft's type certificate.
- 315. Boeing's acts and conduct as averred herein have cause substantial, irrecoverable and irreparable consequential damages to Timaero's business reputation and goodwill, and have caused the resulting loss in the value of Timaero's business which is continuing and has constituted an ongoing concern for Timaero. At the time the Purchase Agreement and each of the Supplemental Agreements were executed, Boeing knew or should have known that Timaero would sell or enter into leasing contracts with third parties for the subject aircraft. For example, in Letter Agreement VEB-PA04022-LA-1301891 to the Purchase Agreement, Boeing acknowledged that "[i]t is understood that Customer [Timaero] intends to lease the 737 MAX to a third party or parties...and that such Lessees will be in the commercial airline business as an operator of aircraft." Timaero, however, has

not been able to conduct its business as usual and lease or sell the subject undelivered aircraft due to Boeing's fraud.

- 316. Pursuant to the Purchase Agreement and the Supplemental Agreements, Timaero notified Boeing on February 28, 2019 that it planned to sell two 737 MAX aircraft scheduled to be delivered in May 2019 and July 2019 to AFG Aviation, who would lease the aircraft to NordStar Airlines. Boeing began customizing the aircraft specifically to NordStar's requirements and specifications. However, three days after the Ethiopian Airlines crash on March 13, 2019, Timaero notified Boeing that "[u]nder the circumstances, Nordstar has put the entire discussion on hold." Timaero also notified Boeing that "[a]ll our other potential clients have put their discussions with us on hold as well pending further developments." Timaero has been unable to sell or lease any 737 MAX aircraft since the two catastrophes.
- 317. As a result, Timaero has lost substantial business and revenues, and the 737 MAX's reputation is permanently tarnished, and thus its value diminished due to Boeing's actions.
- 318. Further, Boeing has refused to refund Timaero its advanced payments specified above that were made in reliance on the truth of Boeing's representations and omissions, and in accordance with the terms of the Purchase Agreement.
- 319. Boeing's affirmative misrepresentations and material omissions as set forth herein comprise fraud. These misrepresentations and omissions were significant and material and were intended to and did mislead Timaero. Timaero acted in reliance upon Boeing's misrepresentations and omissions and has suffered damages thereby. Timaero

claims all damages to which it is entitled under applicable law and in an amount to be determined at trial.

Count II – Negligent Misrepresentation

- 320. Timaero realleges the allegations of all prior paragraphs as if each is fully set forth herein.
- 321. Boeing is the manufacturer, designer, distributor, seller and/or supplier of the 737 MAX model aircraft. Under the directive of senior management, Boeing and/or employees working in the scope of their employment made knowingly false statements and/or omissions about material facts to Timaero to influence Timaero's decision to purchase the 737 MAX, execute the Purchase Agreement, execute the Supplemental Agreements (each of which provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect,"), and to accept delivery of two 737 MAX aircraft.
- 322. Boeing knew by at least 2012 that it could not build an aircraft under a 737 amended type certificate requiring only Level B differences training because of the aerodynamic problems created by placing larger, more fuel-efficient engines on the existing 737 NG frame. Boeing chose not to make the necessary structural changes to the aircraft's frame because that would affect the aircraft's ability to be certified under an amended type certification. Instead, Boeing utilized a flight control system (MCAS) to stabilize the aircraft and hid MCAS's full functionality from the FAA and Timaero because Boeing knew MCAS would jeopardize Level B non-simulator training. Boeing's plan enabled it to obtain FAA certification with Level B non-simulator training, and to market the 737 MAX as only

needing computer-based training for 737 NG pilots. However, Boeing knew those statements were false. Further, the FAA repeatedly communicated to Boeing that adding MCAS (among other features) would result in additional simulator training.

- 323. As detailed above, however, as part of Boeing's authorized sales communications to induce customers to buy 737 MAX aircraft, Boeing represented to Timaero in multiple meetings, marketing materials, business proposals, press releases, and publicly that the 737 MAX would not require additional simulator training for pilots already certified to fly its predecessor 737 NG (Level B non-simulator pilot training requirements), and would be airworthy, safe, free from design defects, and in compliance with appropriate aviation regulations. Boeing and Timaero expressly contracted in the Purchase Agreement that no additional simulator training would be required for 737 NG pilots.
- 324. Boeing's representations were false, misleading, and/or in reckless or negligent disregard of the truth. Boeing also concealed all or parts of the truth of material facts, including the 737 MAX's aerodynamic instability and the MCAS flight control system, when it had a legal duty to speak, and when it had already made representations to Timaero and the FAA.
- 325. If Timaero had known about the aerodynamic instability during development and testing, MCAS, the design changes of the 737 MAX that required the use of MCAS, and the risks that these modifications posed, Timaero would not have purchased MAX aircraft from Boeing, would not have entered into the Supplemental Agreements, and would not have accepted delivery of its Aircraft. But, in conjunction with the execution of the Purchase Agreement and each of the Supplemental Agreements, Timaero relied on Boeing's assurances that the 737 MAX was an improved version of the

737 that would not require additional training or depart significantly from the operation and flight characteristics of the 737 NG or previous generations of the 737, and that the 737 MAX would continue to have the best safety record of any aircraft.

- 326. As a result of Boeing's inducement of Timaero to buy MAX aircraft through the Purchase Agreement and each of the Supplemental Agreements, and Boeing's other wrongful conduct, the 737 MAX aircraft that Timaero agreed to purchase have lost substantial value, if not all of their value, and/or are commercially damaged beyond repair according to the terms of the Purchase Agreement. Timaero has thus incurred significant damages in the form of diminution of value, as well as additional damages in the form of additional expense, costs of temporary cover, and other items.
- 327. Even when or if Boeing is able to completely fix the aircraft so that they can fly, Timaero's ability to use the aircraft will be substantially diminished due to continuing and legitimate safety fears concerning the 737 MAX resulting from Boeing's misconduct.
- 328. Boeing did not disclose any of the 737 MAX design and development problems to purchasers, including Timaero, because it did not want to jeopardize sales, including Boeing's sale of the aircraft to Timaero.
- 329. Boeing knew that the 737 MAX had materially different flight characteristics from the 737 NG, requiring Boeing to include MCAS in the 737 MAX.
- 330. Boeing did not disclose MCAS or the reasons why it was necessary in the 737 MAX to Timaero. Boeing had a duty to disclose MCAS to customers, including Timaero, the FAA, and pilots. Failure to disclose MCAS and train pilots on MCAS resulted in two fatal crashes.

- 331. Boeing did not disclose to Timaero that MCAS could engage in a way that would cause the 737 MAX to enter into a dive based on a fault or malfunction in only one of the aircraft's two AOA sensors.
- 332. As detailed above, Boeing continued to make the same knowingly false representations and omissions to Timaero before, during, and after signing the Purchase Agreement and before, during and after execution of each of the Supplemental Agreements.
- 333. Also as detailed above, when Boeing promised before, during, and after execution of the Purchase Agreement and the Supplemental Agreements that the 737 MAX would not require simulator training, Boeing knew its misrepresentations were false and had no intention of fulfilling its promise.
- 334. As a result of management's coordinated directives to sell the aircraft with false representations about training, Boeing set out to obtain an unwarranted certification matching that falsehood. After testing and test flights identified major flight problems, and after Boeing incompletely and disingenuously disclosed its initial MCAS design to the FAA, Boeing totally redesigned MCAS to address long-known flight stability problems. Boeing expanded and materially changed MCAS's functional abilities. Boeing knew it could not disclose its MCAS changes to the FAA because it would put its goal of no additional simulator training at even greater risk. As a result, Boeing purposely misrepresented the functional abilities of MCAS to the FAA, mischaracterized MCAS's failure condition, and omitted the MCAS redesign from the FAA. In the limited amount of information related to MCAS Boeing did disclose to the FAA, Boeing purposely mischaracterized the system and purposely gave only small amounts of information to

different disconnected FAA employees so that the FAA could not piece the information together.

- 335. Further, Boeing knew there was a serious risk of the 737 MAX crashing and knew that MCAS was dangerous. Boeing's documents show it concealed the 737 MAX's software problems from the FAA, and a skilled Boeing test pilot reported on May 5, 2015 crashing the 737 MAX multiple times in the simulator. Boeing knew that its test pilots' crashed simulator results put the entire program at risk from being approved, and therefore, purposely omitted those results from the FAA and Timaero. Boeing concealed the fact that the 737 MAX was likely to crash from Timaero, who was left to learn the risks itself.
- 336. Boeing made these representations and omissions knowing that Timaero was relying on their truth. It made them deliberately for its own economic advantage.
- 337. Boeing had a legal duty to correct its misrepresentations once made to the FAA and Timaero, and disclose its omissions to the FAA and Timaero, but failed to do so. Timaero relied on Boeing's misrepresentations and omissions as true at least because of Boeing's superior knowledge concerning the 737 MAX. Timaero has to rely on Boeing properly obtaining FAA certification because Timaero has no way to check Boeing's compliance with FAA requirements. Boeing purposely misled the FAA and Timaero and purposely omitted material information from the FAA to obtain certification, and from Timaero, as detailed above. Boeing's representations of airworthiness and only computer-based training for certified 737 NG pilots, combined with the circumstances of a long-term contractual relationship during certification, involving the initial Purchase Agreement and seven Supplemental Agreements, that involved Boeing delivering the aircraft and Timaero's pre-delivery payments, imposed on Boeing a duty to tell Timaero of problems

that undermined or contravened its representations, including a duty to disclose that Boeing was not conducting the FAA certification process properly and that it was defrauding the FAA.

- 338. Timaero was further aware of and relied on Boeing's representations to the FAA because Boeing received an FAA certification as required by the Purchase Agreement and Boeing communicated certification and satisfaction of the Purchase Agreement to Timaero. Boeing's representations to the FAA are inherently incorporated in Boeing's representations to Timaero that it obtained FAA certification and Boeing's delivery of aircraft that Boeing represents is validly certified.
- 339. Timaero was entitled to rely, and did rely, on Boeing's misrepresentations and omissions, as specified herein. Timaero would not have performed the following actions had it known the truth at the respective dates about Boeing's misrepresentations or that Boeing was concealing objectively material information relating to the 737 MAX from the FAA and Timaero:
 - 1. entered into the Purchase Agreement on January 10, 2014 to purchase twenty (20) 737 MAX aircraft and paid a 1% deposit of the contract price of approximately \$20 million;
 - 2. entered into the VEB-AGTA on January 10, 2014;
 - 3. paid Boeing pre-delivery payments of \$189,224,800, which included paying 4% of each aircraft's sale price at 24 months prior to delivery, and 5% of each aircraft's sale price at 21 months, 18 months, 15 months, and 12 months prior to delivery;
 - 4. entered into Supplemental Agreement No. 1 on September 15, 2016, which converted two (2) Boeing 737-800 aircraft from a prior purchase agreement into two (2) Boeing 737 MAX aircraft, and which provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect.";
 - 5. entered into Supplemental Agreement No. 2 on August 28, 2017, which provided that "[t]he Purchase Agreement is amended as set forth above, and

- all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect.";
- 6. entered into Supplemental Agreement No. 3 on November 12, 2017, which provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect.":
- 7. entered into Supplemental Agreement No. 4 on February 26, 2018, which provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect.";
- 8. entered into Supplemental Agreement No. 5 on September 21, 2018, which provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect.";
- 9. entered into Supplemental Agreement No. 6 on September 28, 2018, which provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect.";
- 10. entered into Supplemental Agreement No. 7 on November 29, 2018, which provided that "[t]he Purchase Agreement is amended as set forth above, and all other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect.";
- 11. paid for and accepted delivery of two (2) 737-MAX aircraft in December 2018; and
- 12. unwittingly omitted material facts to Timaero's customers and potential customers to sell and lease 737 MAX aircraft.
- 340. Boeing's misrepresentations and omissions were the proximate cause and cause in fact of Timaero's damages.
- 341. Notably, as stated in the DPA, Boeing conspired to defraud the FAA AEG "[f]rom at least in and around November 2016 through at least in and around December 2018." DPA-A ¶ 16. Accordingly, despite the fact that Boeing knew of material defects in the 737 MAX long before, even Boeing's admitted fraud occurred coexistent in time with the execution of the Supplemental Agreements and delivery of two 737 MAX aircraft to Timaero.

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Further, with respect to Supplemental Agreement No. 1 entered into on September 15, 2016, which converted two Boeing 737-800 aircraft from a prior purchase agreement into two Boeing 737 MAX aircraft, Boeing secretly expanded MCAS's use as explained herein 6-months prior to execution of Supplemental Agreement No. 1, on March 30, 2016, pursuant to Revision D. For the reasons stated herein, Boeing knew that the expansion of MCAS's operation on March 30, 2016 and the version of MCAS released on August 15, 2016 precluded Level B non-simulator training in all 22 of the 737 MAX aircraft that were to be delivered to Timaero. Boeing thus knew at least as early as March 30, 2016 and without question by August 15, 2016, that it could not deliver aircraft to Timaero that only required Level B non-simulator training. Nevertheless, Boeing represented as of September 15, 2016 in Supplemental Agreement No. 1 that "all other terms and conditions of the [2014] Purchase Agreement," including the promise of delivering 20 aircraft that require only Level B non-simulator training "remain unchanged and [] in full force and effect." Boeing knew that its representation was not true and that its promise to deliver 20 aircraft from the 2014 Purchase Agreement and the two aircraft from Supplemental Agreement No. 1 with only Level B non-simulator training would not be fulfilled. Boeing never intended that its promises would be fulfilled. Timaero relied on Boeing's misrepresentation that "all [] terms and conditions of the [2014] Purchase Agreement remain unchanged and are in full force and effect" in executing Supplemental Agreement No. 1. Timaero would not have entered into Supplemental Agreement No. 1, or any of the Supplemental Agreements, had Boeing disclosed that it secretly expanded MCAS's use at least as early as March 2016.

- 343. Further, upon information and belief, the information that led to the decision to design and implement Revision D was known to Boeing prior to Timaero's execution of the Purchase Agreement in January 2014. Thus, upon information and belief, Boeing knew that an expansion of MCAS was required prior to Timaero's execution of the Purchase Agreement. Boeing thus knew prior to January 10, 2014 that it could not deliver aircraft to Timaero that only required Level B non-simulator training. Nevertheless, Boeing represented and promised in the Purchase Agreement that it would deliver 20 aircraft that require only Level B non-simulator training. Boeing knew that its representations and promises were not true and that its promise to deliver 20 aircraft with only Level B non-simulator training would not be fulfilled. Boeing never intended that its promises would be fulfilled. Timaero relied on Boeing's misrepresentation in executing the Purchase Agreement. Timaero would not have entered into any of the Supplemental Agreements had Boeing disclosed its knowledge that MCAS's use would need to be expanded.
- 344. At the time of this Third Amended Complaint, Boeing was contractually obligated in accordance with the Purchase Agreement to deliver five (5) Boeing Model 737-8 Aircraft to Timaero. Boeing, however, has only delivered two (2) 737-8 Aircraft, which, unknown to Timaero at the time, did not conform to the aircraft's type certificate.
- 345. Boeing's acts and conduct as averred herein have cause substantial, irrecoverable and irreparable consequential damages to Timaero's business reputation and goodwill, and have caused the resulting loss in the value of Timaero's business which is continuing and has constituted an ongoing concern for Timaero. At the time the Purchase Agreement and each of the Supplemental Agreements were executed, Boeing knew or should have known that Timaero would sell or enter into leasing contracts with third parties

for the subject aircraft. For example, in Letter Agreement VEB-PA04022-LA-1301891 to the Purchase Agreement, Boeing acknowledged that "[i]t is understood that Customer [Timaero] intends to lease the 737 MAX to a third party or parties...and that such Lessees will be in the commercial airline business as an operator of aircraft." Timaero, however, has not been able to conduct its business as usual and lease or sell the subject undelivered aircraft due to Boeing's fraud.

- 346. Pursuant to the Purchase Agreement and the Supplemental Agreements, Timaero notified Boeing on February 28, 2019 that it planned to sell two 737 MAX aircraft scheduled to be delivered in May 2019 and July 2019 to AFG Aviation, who would lease the aircraft to NordStar Airlines. Boeing began customizing the aircraft specifically to NordStar's requirements and specifications. However, three days after the Ethiopian Airlines crash on March 13, 2019, Timaero notified Boeing that "[u]nder the circumstances, Nordstar has put the entire discussion on hold." Timaero also notified Boeing that "[a]ll our other potential clients have put their discussions with us on hold as well pending further developments." Timaero has been unable to sell or lease any 737 MAX aircraft since the two catastrophes.
- 347. As a result, Timaero has lost substantial business and revenues, and the 737 MAX's reputation is permanently tarnished, and thus its value diminished due to Boeing's actions.
- 348. Further, Boeing has refused to refund Timaero its advanced payments specified above that were made in reliance on the truth of Boeing's representations and omissions, and in accordance with the terms of the Purchase Agreement.

349. Boeing's affirmative misrepresentations and material omissions as set forth herein comprise fraud. These misrepresentations and omissions were significant and material and were intended to and did mislead Timaero. Timaero acted in reliance upon Boeing's misrepresentations and omissions and has suffered damages thereby. Timaero claims all damages to which it is entitled under applicable law and in an amount to be determined at trial.

Count IV – Breach of Contract

- 350. Timaero realleges the allegations of all prior paragraphs as if each is fully set forth herein.
- 351. Boeing and Timaero are parties to Purchase Agreement Number PA-04022 relating to Boeing Models 737-8 Aircraft and Aircraft General Terms Agreement dated January 10, 2014, which was identified as VEB-AGTA ("AGTA"), which incorporate letter agreements, tables, exhibits, and the Supplemental Agreements.
- 352. Boeing breached the Purchase Agreement, the AGTA, and the Supplemental Agreements, including by (a) failing to comply with regulatory requirements and certificates, and (b) by delaying the scheduled delivery of aircraft, including due to Boeing's fault or negligence.
- 353. Article 3 of the AGTA pertains to Regulatory Requirements and Certificates that must be obtained by Boeing and specifically provides in Section 3.1 as follows:
 - 3.1 Certificates. Boeing will manufacture each aircraft to conform to the appropriate Type Certificate issued by the United States Federal Aviation Administration (FAA) for the specific model of aircraft and will obtain from the FAA and furnish to Customer at delivery of each aircraft either a Standard Airworthiness Certificate or an Export Certificate of

Airworthiness issued pursuant to Part 21 of the Federal Aviation Regulations.

- 354. Boeing breached the terms of the AGTA by providing false, misleading, and/or negligent misrepresentations or omitting material information to the FAA and other aviation authorities and by not designing and manufacturing the 737 MAX in accordance with FAA regulations, and all other pertinent United States federal aviation regulations, pertaining to type certificates that must be obtained for the design and manufacture of new model aircraft.
- 355. Article 7 of the AGTA titled "Excusable Delay" specifically provides in Section 7.1 as follows:
 - 7.1 General. Boeing will not be liable for any delay in the scheduled delivery month of an aircraft or other performance under a purchase agreement caused by (i) acts of God; (ii) war or armed hostilities; (iii) government acts or priorities; (iv) fires, floods, or earthquakes; (v) strikes or labor troubles causing cessation, slowdown, or interruption of work; (vi) inability, after due and timely diligence, to procure materials, systems, accessories, equipment or parts; or (vii) any other cause to the extent such cause is beyond Boeing's control and not occasioned by Boeing's fault or negligence. A delay resulting from any such cause is defined as an Excusable Delay.
- 356. As set forth in Section 7.1, all of the causes considered Excusable Delay are those that are "beyond Boeing's control and not occasioned by Boeing's fault or negligence."
- 357. Boeing's delay in the delivery of aircraft to Timaero in breach of the aircraft delivery schedule agreed to by the parties is the result of Boeing's fault and negligence in designing the aircraft with a defective flight control system that it did not properly test and analyze, and for which it provided incorrect and incomplete analysis to the FAA as part of its certification.

358. At the time of Timaero's first Motion to Amend the Complaint, Boeing was contractually obligated in accordance with the Purchase Agreement to deliver five (5) Boeing Model 737-8 Aircraft to Timaero. Boeing, however, has only delivered two (2) 737-8 Aircraft. Boeing's delay is non-excusable, which further entitles Timaero to liquidated damages under the Purchase Agreement.

359. Even if Boeing's delay were somehow excusable under the AGTA, Boeing breached the AGTA by (a) failing to provide notice of a delivery delay exceeding twelve months, pursuant to Section 7.2, at any time within twelve months of the scheduled delivery date for aircraft due to be delivered in May 2019, July 2019, and January 2020; and (b) upon providing notice of a delivery delay exceeding twelve months for these aircraft on February 15, 2021, refusing to return at least \$51,330,000 in advanced payments for these aircraft pursuant to Section 7.6 upon Timaero's notice of termination sent on March 4, 2021 pursuant to Section 7.4.

360. On February 15, 2021, Boeing issued a revised delivery date under Section 7.4 for Timaero's aircraft scheduled to be delivered in May 2019, July 2019, and January 2020. The revised delivery date for these aircraft extended more than twelve (12) months beyond the original delivery dates. As a result, and notwithstanding any of the relief requested herein by Timaero to rescind, cancel, or set aside the Purchase Agreement, on March 4, 2021, Timaero terminated the aircraft scheduled to be delivered in May 2019, July 2019, and January 2020 pursuant to Section 7.4 of the AGTA and based on Boeing's assertions that the Purchase Agreement is enforceable. Pursuant to Section 7.6 of the AGTA, Boeing must immediately return the \$51,330,000 in advance payments for these aircraft. However, Boeing has refused to return Timaero's advance payments. In fact, over

one month after Timaero's March 4 termination, on April 19, Boeing terminated the exact aircraft that were already terminated by Timaero. Per Boeing, the advanced payments are being "retained by Boeing to offset against damages caused by Customer's repudiation of the Purchase Agreement." This is not permissible under Washington law, which provides that, even if Boeing "justifiably" withholds delivery of aircraft because of Timaero's alleged breach, Timaero is entitled to restitution of any payment amount that exceeds \$500 (i.e., \$51,329,500) unless the parties' agreement provides for a greater value. RCW 62A.2-718(2). The Purchase Agreement has no such provision.

- 361. Accordingly, Boeing's actions of (1) issuing a revised delivery date for the aircraft scheduled to be delivered in May 2019, July 2019, and January 2020, and (2) terminating the May 2019, July 2019, and January 2020 aircraft, which demonstrates Boeing's agreement that (a) Timaero properly and timely terminated the aircraft scheduled to be delivered in May 2019, July 2019, and January 2020 under the AGTA, (b) Boeing immediately owes Timaero \$51,330,000 in advance payments, or at least immediate payment of \$51,329,500 in advance payments, for such aircraft, and (c) Boeing discharges Timaero from "all obligations and liabilities" with respect to such aircraft."
- 362. Furthermore, contracts contain an implied covenant of good faith and fair dealing under Washington law. Where one party to the contract deliberately contravenes the intention and spirit of the contract, that party is liable for breach of the implied covenant of good faith and fair dealing.
- 363. Boeing's actions and/or omissions as set forth herein are in breach of the Purchase Agreement's express provisions and also its implied covenant of good faith and fair dealing. Boeing's acts and/or omissions, including, but not limited to, the airworthiness

of the 737 MAX aircraft, the functional capacity of MCAS and the issues associated with MCAS, simulator training, and Boeing's test simulator results, including that Boeing's own test pilots were crashing the aircraft and that MCAS was running rampant, were contrary to the standards of good faith and fair dealing, and were made in such a manner as to evade the spirit of the Purchase Agreement, and/or so as to deny Timaero the expected benefits of the transaction.

364. Boeing's acts and conduct as averred herein have foreseeably caused substantial, irrecoverable and irreparable consequential damages to Timaero's business reputation and goodwill, and have caused the resulting loss in the value of Timaero's business which is continuing and has constituted an ongoing concern for Timaero. At the time the Purchase Agreement was executed, Boeing knew or should have known that Timaero would sell or enter into leasing contracts with third parties for the subject aircraft. For example, in Letter Agreement VEB-PA04022-LA-1301891 to the Purchase Agreement, Boeing acknowledged that "[i]t is understood that Customer [Timaero] intends to lease the Aircraft to a third party or parties...and that such Lessees will be in the commercial airline business as an operator of aircraft." Timaero, however, has not been able to conduct its business as usual and lease or sell the subject undelivered aircraft due to Boeing's breach. As a result, Timaero has lost substantial business and revenues.

365. Pursuant to the Purchase Agreement, Timaero notified Boeing on February 28, 2019 that it planned to sell two 737 MAX aircraft scheduled to be delivered in May 2019 and July 2019 to AFG Aviation, who would lease the aircraft to NordStar Airlines. Boeing began customizing the aircraft specifically to NordStar's requirements and specifications. However, three days after the Ethiopian Airlines crash on March 13, 2019,

Timaero notified Boeing that "[u]nder the circumstances, Nordstar has put the entire discussion on hold." Timaero also notified Boeing that "[a]ll our other potential clients have put their discussions with us on hold as well pending further developments." Timaero has been unable to sell or lease any 737 MAX aircraft since the two catastrophes.

- 366. As a result, Timaero has lost substantial business and revenues, and the 737 MAX's reputation is permanently tarnished, and thus its value diminished due to Boeing's actions.
- 367. Further, Timaero has not been able to recover its advanced payments to Boeing for the subject aircraft that were made in accordance with the terms of the Purchase Agreement.
- 368. The agreement between Timaero and Boeing included Boeing's Aircraft General Transfer Agreement (AGTA), the Customer Support supplement, Letter Agreement 1301894 dated January 10, 2014, and Letter Agreement 1301883 dated January 10, 2014.

369.

is no clause or term of the agreement between Timaero and Boeing that authorizes Boeing to retain any portion of the advance payments to be returned.

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There

- 370. Boeing terminated aircraft 60455, 60444, 60450 by Boeing's letter of April 19, 2021. Boeing did not return the advance payments for those aircraft.
- 371. Since Boeing delayed return of the advance payments for the terminated aircraft the money became a debt on which interest should accrue at the Washington statutory rate. As of May 19, 2021, when the return of advance payments on the first three terminated aircraft was due, interest began to accrue on the \$168,059,847 of advance payments that Boeing should have returned to Timaero for those aircraft according to Boeing's own ledger (BOETIM000502-BOETIM000528).
- 372. Letter Agreement 1301883 dated January 10, 2014 provides for liquidated damages and return of advance payments for non-excusable delay.
- 373. By a letter dated May 7, 2024, Timaero terminated Boeing aircraft 60442, 60443, 60445, 60446, 60447, 60448, 60449, 60451, 60452, 60453, 60454, 60456, 60457, 64180, 64181, 60440 and 60441 for non-excusable delay

 According to Letter Agreement 1301883, Boeing must return advance payments made for the terminated aircraft, in the amount of \$16,140,880. Additionally, Boeing must pay in liquidated damages.
- 374. Since Boeing has delayed the return of advance payments and the payment of liquidated damages more than 30 days, those funds became a debt on which interest should accrue at the Washington statutory rate. As of June 11, 2024, when those funds were due to Timaero, interest began to accrue on the amount of \$47,046,880.

375. Timaero has suffered damages as a result of Boeing's breach and claims all damages to which it is entitled under applicable law and in an amount to be determined at trial.

VI. PRAYER FOR RELIEF

WHEREFORE, Timaero prays the entry of a money judgment against Boeing in excess of the jurisdictional limit in an amount as a jury deems reasonable and just, together with costs, attorneys' fees, and such other damages as may be allowed under applicable law. Timaero further demands a trial by jury of all issues triable as of right by a jury.

Timaero requests the following relief:

- A. an order directing the rescission of the Purchase Agreement Number PA-04022:
- B. an order directing Purchase Agreement Number PA-04022 between Boeing and Timaero be cancelled and set aside;
- C. an award for damages to compensate Timaero for all damages proximately caused by Boeing's wrongful acts and omissions as alleged herein in an amount of at least \$277,288,870.39, which includes but is not limited to predelivery payments being held by Boeing, liquidated damages and loan interest accrued by Timaero;
- D. an award for damages to compensate Timaero for its lost profits caused by Boeing's wrongful acts and omissions as alleged herein in an amount to be determined at trial;
- E. an award of punitive damages for Boeing's fraudulent acts in an amount at least three times the amount of compensatory damages;
- F. recovery of Timaero's costs incurred in bringing this action, including attorneys' fees, to the extent authorized by law;
- G. any other damages recoverable under applicable law; and
- H. such other relief as the Court deems just and equitable under applicable law.

1	DATED this O days of Assessed 2024
2	DATED this 9 day of August, 2024. WHITMYER IP GROUP LLC
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